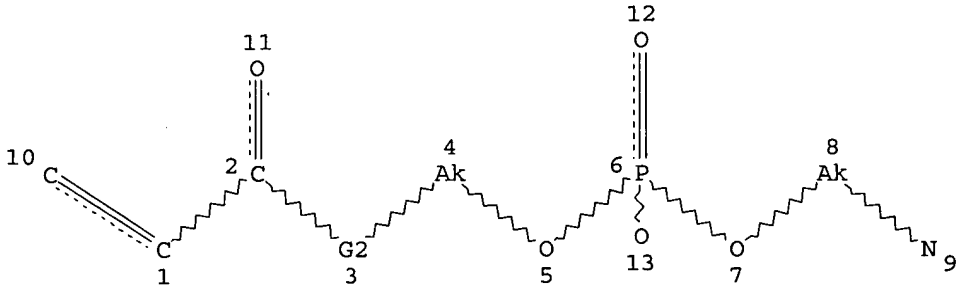
=> d que stat l13
L11 STR



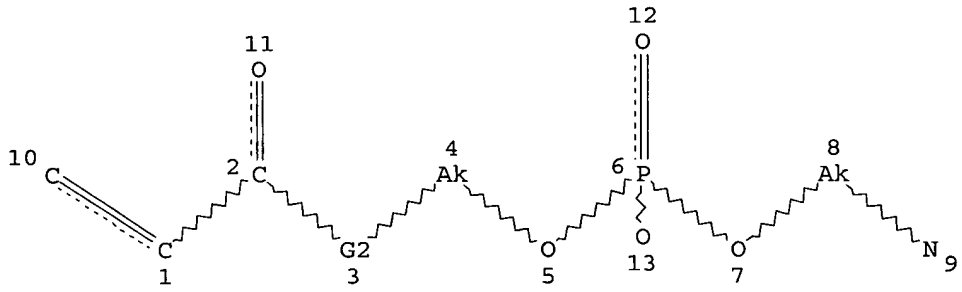
VAR G2=O/N
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L13 832 SEA FILE=REGISTRY SSS FUL L11

100.0% PROCESSED 56776 ITERATIONS 832 ANSWERS
SEARCH TIME: 00.00.03

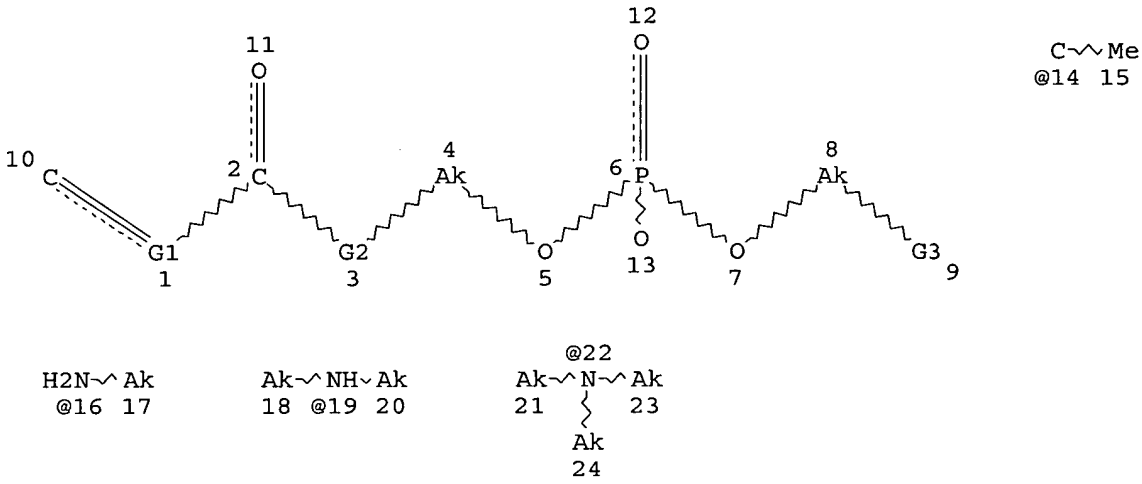
=> d que stat l18
L11 STR



VAR G2=O/N
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L13 832 SEA FILE=REGISTRY SSS FUL L11
L16 STR



VAR G1=CH/14
VAR G2=O/NH
VAR G3=NH3/16/19/22
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 10
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE
L18 553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16

100.0% PROCESSED 832 ITERATIONS 553 ANSWERS
SEARCH TIME: 00.00.01

=> d l64 1-17
L64 ANALYZE L18 1- LC : 17 TERMS

TERM #	# OCC	# DOC	% DOC	LC
1	535	535	96.75	CA
2	535	535	96.75	CAPLUS
3	255	255	46.11	TOXCENTER
4	115	115	20.80	USPATFULL
5	29	29	5.24	USPAT2
6	3	3	0.54	BIOSIS
7	3	3	0.54	CHEMLIST
8	3	3	0.54	MEDLINE
9	2	2	0.36	CASREACT
10	2	2	0.36	DIOGENES
11	2	2	0.36	IPA
12	2	2	0.36	TSCA
13	1	1	0.18	BIOBUSINESS
14	1	1	0.18	CANCERLIT
15	1	1	0.18	CHEMINFORMRX
16	1	1	0.18	PIRA
17	1	1	0.18	PROMT

********* END OF L64***

```
=> d que nos l33
L11             STR
L13          832 SEA FILE=REGISTRY SSS FUL L11
L16             STR
L18          553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L24          715 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18
L25        56930 SEA FILE=HCAPLUS ABB=ON  PLU=ON  IMMUNOASSAY+PFT,NT/CT
L26        47927 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "IMMUNOCHEMICAL ANALYSIS (L)
                 IMMUNOASSAY"+PFT,NT/CT
L27         5294 SEA FILE=HCAPLUS ABB=ON  PLU=ON  AGGLUTINATION+PFT,NT/CT
L28           17 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND (L25 OR L26 OR L27)
L29              QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                 LISA OR RIA
L31           16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 (L) L29
L33           23 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 OR L31


=> d his l39

     (FILE 'USPATFULL, USPAT2' ENTERED AT 14:41:23 ON 20 SEP 2005)
L39            3 S L35 AND L38

=> d que nos l39
L11             STR
L13          832 SEA FILE=REGISTRY SSS FUL L11
L16             STR
L18          553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L35           78 SEA L18
L38        23444 SEA G01N033-5?/IPC
L39            3 SEA L35 AND L38


=> d que nos l62
L40         2142 SEA FILE=WPIX ABB=ON  PLU=ON  (B415 (P) B701 (P) B713 (P) B815
                 (P) B831 (P) H1 (P) J011)/M0,M1,M2,M3,M4,M5,M6
L50          408 SEA FILE=WPIX ABB=ON  PLU=ON  C08F030-02/IPC
L59           58 SEA FILE=WPIX ABB=ON  PLU=ON  L40 AND (G01N033-53?/ICM,ICS)
L62            2 SEA FILE=WPIX ABB=ON  PLU=ON  L59 AND L50


=> d que nos l66
L11             STR
L13          832 SEA FILE=REGISTRY SSS FUL L11
L16             STR
L18          553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63              QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                 LISA OR RIA OR ?COAG?
L65          260 SEA FILE=TOXCENTER ABB=ON  PLU=ON  L18
L66           31 SEA FILE=TOXCENTER ABB=ON  PLU=ON  L65 AND L63


=> d que nos l72
L11             STR
L13          832 SEA FILE=REGISTRY SSS FUL L11
L16             STR
L18          553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63              QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
```

```
                LISA OR RIA OR ?COAG?
L67           55 SEA FILE=MEDLINE ABB=ON  PLU=ON  L18
L68       282436 SEA FILE=MEDLINE ABB=ON  PLU=ON  IMMUNOASSAY+PFT,NT/CT
L69         6576 SEA FILE=MEDLINE ABB=ON  PLU=ON  AGGLUTINATION+PFT,NT/CT
L70            3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L67 AND (L68 OR L69)
L71           21 SEA FILE=MEDLINE ABB=ON  PLU=ON  L67 AND L63
L72           21 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L70 OR L71)


=> d que nos l73
L11               STR
L13           832 SEA FILE=REGISTRY SSS FUL L11
L16               STR
L18           553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L73             0 SEA FILE=EMBASE ABB=ON  PLU=ON  L18


=> d his l75

     (FILE 'BIOSIS, CANCERLIT' ENTERED AT 15:20:16 ON 20 SEP 2005)
L75            13 S L74 AND L63

=> d que nos l75
L11               STR
L13           832 SEA FILE=REGISTRY SSS FUL L11
L16               STR
L18           553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63               QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                  LISA OR RIA OR ?COAG?
L74            57 SEA L18
L75            13 SEA L74 AND L63


=> d his l81

     (FILE 'HCAPLUS, TOXCENTER, WPIX, MEDLINE, BIOSIS, CANCERLIT, EMBASE,
     PASCAL, JICST-EPLUS, DRUGU, BIOTECHNO, BIOTECHDS, SCISEARCH, CONF,
     CONFSCI, DISSABS' ENTERED AT 15:25:01 ON 20 SEP 2005)
L81             6 DUP REM L80 (6 DUPLICATES REMOVED)

=> d que nos l81
L63               QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                  LISA OR RIA OR ?COAG?
L76          1325 SEA SUMIDA, K?/AU
L77         17872 SEA WADA, K?/AU
L78         14175 SEA ISHIHARA, K?/AU
L79          3656 SEA (L76 OR L77 OR L78) AND L63
L80            12 SEA L79 AND WAKO/CS,SO,PA
L81             6 DUP REM L80 (6 DUPLICATES REMOVED)



=> d his ful

     (FILE 'HOME' ENTERED AT 12:50:28 ON 20 SEP 2005)

     FILE 'STNGUIDE' ENTERED AT 12:50:39 ON 20 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 12:51:02 ON 20 SEP 2005
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```
L1            0 SEA ABB=ON  PLU=ON  US2003-626502/APPS

      FILE 'STNGUIDE' ENTERED AT 12:51:19 ON 20 SEP 2005

      FILE 'ZCAPLUS' ENTERED AT 12:52:40 ON 20 SEP 2005
                E JP2001-169051/APPS

      FILE 'HCAPLUS' ENTERED AT 12:52:48 ON 20 SEP 2005
L2            1 SEA ABB=ON  PLU=ON  JP2001-169051/APPS
                SAVE TEMP L2 FET502HCAAPP/A
                D IBIB ED AB IND

      FILE 'STNGUIDE' ENTERED AT 12:53:16 ON 20 SEP 2005

      FILE 'HCAPLUS' ENTERED AT 12:54:13 ON 20 SEP 2005
L3            1 SEA ABB=ON  PLU=ON  US2004-626502/APPS
                SAVE TEMP L3 FET502HCAAP2/A

      FILE 'STNGUIDE' ENTERED AT 12:54:48 ON 20 SEP 2005

      FILE 'HCAPLUS' ENTERED AT 12:55:14 ON 20 SEP 2005
                D IBIB ED AB IND

      FILE 'STNGUIDE' ENTERED AT 12:55:14 ON 20 SEP 2005

      FILE 'HCAPLUS' ENTERED AT 12:56:22 ON 20 SEP 2005
L4            0 SEA ABB=ON  PLU=ON  L2 NOT L3

      FILE 'STNGUIDE' ENTERED AT 12:56:30 ON 20 SEP 2005

      FILE 'WPIX' ENTERED AT 12:56:35 ON 20 SEP 2005
L5            1 SEA ABB=ON  PLU=ON  US2004-626502/APPS
                SAVE TEMP L5 FET502WPIAPP/A
                D IALL CMC

      FILE 'STNGUIDE' ENTERED AT 12:57:05 ON 20 SEP 2005

      FILE 'REGISTRY' ENTERED AT 12:57:35 ON 20 SEP 2005

      FILE 'HCAPLUS' ENTERED AT 12:57:42 ON 20 SEP 2005
L6              TRA L3 1- RN :        9 TERMS

      FILE 'REGISTRY' ENTERED AT 12:57:45 ON 20 SEP 2005
L7            9 SEA ABB=ON  PLU=ON  L6
                SAVE TEMP L7 FET502REGAPP/A
                D SCAN

      FILE 'STNGUIDE' ENTERED AT 12:58:14 ON 20 SEP 2005
                D SAVED

      FILE 'LREGISTRY' ENTERED AT 13:02:29 ON 20 SEP 2005
L8              STRUCTURE UPLOADED
L9              STR L8

      FILE 'REGISTRY' ENTERED AT 13:05:36 ON 20 SEP 2005
L10           0 SEA SSS SAM L9
                D QUE STAT

      FILE 'STNGUIDE' ENTERED AT 13:05:56 ON 20 SEP 2005
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     FILE 'LREGISTRY' ENTERED AT 13:06:35 ON 20 SEP 2005
L11             STR L9

     FILE 'REGISTRY' ENTERED AT 13:07:51 ON 20 SEP 2005
L12           25 SEA SSS SAM L11

     FILE 'STNGUIDE' ENTERED AT 13:08:58 ON 20 SEP 2005
                D QUE STAT

     FILE 'REGISTRY' ENTERED AT 13:09:57 ON 20 SEP 2005
L13          832 SEA SSS FUL L11
                SAVE TEMP L13 FET502PSET1/A
L14            5 SEA ABB=ON  PLU=ON  L13 AND L7
L15            4 SEA ABB=ON  PLU=ON  L7 NOT L14
                D SCAN

     FILE 'STNGUIDE' ENTERED AT 13:10:56 ON 20 SEP 2005
                D SAVED

     FILE 'LREGISTRY' ENTERED AT 13:11:22 ON 20 SEP 2005
L16             STR L11

     FILE 'REGISTRY' ENTERED AT 13:15:51 ON 20 SEP 2005
L17           26 SEA SUB=L13 SSS SAM L16
L18          553 SEA SUB=L13 SSS FUL L16
                SAVE TEMP L18 FET502RSET1/A

     FILE 'STNGUIDE' ENTERED AT 13:17:43 ON 20 SEP 2005
                D SAVED

     FILE 'REGISTRY' ENTERED AT 13:18:01 ON 20 SEP 2005
L19            5 SEA ABB=ON  PLU=ON  L14 AND L18

     FILE 'STNGUIDE' ENTERED AT 13:18:30 ON 20 SEP 2005

     FILE 'REGISTRY' ENTERED AT 13:18:37 ON 20 SEP 2005
                D SCAN

     FILE 'STNGUIDE' ENTERED AT 13:18:45 ON 20 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 13:19:12 ON 20 SEP 2005
L20          715 SEA ABB=ON  PLU=ON  L18

     FILE 'STNGUIDE' ENTERED AT 13:19:23 ON 20 SEP 2005

     FILE 'LREGISTRY' ENTERED AT 13:19:43 ON 20 SEP 2005
L21             STR L16

     FILE 'STNGUIDE' ENTERED AT 13:21:43 ON 20 SEP 2005

     FILE 'REGISTRY' ENTERED AT 13:22:37 ON 20 SEP 2005
L22          495 SEA ABB=ON  PLU=ON  L18 AND PMS/CI

     FILE 'HCAPLUS' ENTERED AT 13:23:06 ON 20 SEP 2005
L23          595 SEA ABB=ON  PLU=ON  L22

     FILE 'STNGUIDE' ENTERED AT 13:23:11 ON 20 SEP 2005

     FILE 'ZCAPLUS' ENTERED AT 14:31:19 ON 20 SEP 2005
                E IMMUNOASSAY/CT
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                E E15+ALL
                E AGGLUTINATION/CT
                E E102+ALL

     FILE 'HCAPLUS' ENTERED AT 14:32:44 ON 20 SEP 2005
L24           715 SEA ABB=ON  PLU=ON  L18
L25         56930 SEA ABB=ON  PLU=ON  IMMUNOASSAY+PFT,NT/CT
L26         47927 SEA ABB=ON  PLU=ON  "IMMUNOCHEMICAL ANALYSIS (L) IMMUNOASSAY"+P
                  FT,NT/CT
L27          5294 SEA ABB=ON  PLU=ON  AGGLUTINATION+PFT,NT/CT
L28            17 SEA ABB=ON  PLU=ON  L24 AND (L25 OR L26 OR L27)

     FILE 'STNGUIDE' ENTERED AT 14:33:30 ON 20 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 14:34:15 ON 20 SEP 2005
                D SCAN

     FILE 'STNGUIDE' ENTERED AT 14:34:37 ON 20 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 14:37:13 ON 20 SEP 2005
L29             QUE ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR ELISA
                OR RIA
L30            62 SEA ABB=ON  PLU=ON  L24 AND L29
L31            16 SEA ABB=ON  PLU=ON  L24 (L) L29
L32             6 SEA ABB=ON  PLU=ON  L31 NOT L28
                D SCAN
L33            23 SEA ABB=ON  PLU=ON  L28 OR L31

     FILE 'STNGUIDE' ENTERED AT 14:39:15 ON 20 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 14:39:27 ON 20 SEP 2005
                SAVE TEMP L33 FET502HCA1/A

     FILE 'STNGUIDE' ENTERED AT 14:39:44 ON 20 SEP 2005
                D QUE STAT
                D SAVED

     FILE 'HCAPLUS' ENTERED AT 14:40:58 ON 20 SEP 2005
L34             1 SEA ABB=ON  PLU=ON  L3 AND L33

     FILE 'STNGUIDE' ENTERED AT 14:41:07 ON 20 SEP 2005

     FILE 'USPATFULL' ENTERED AT 14:41:16 ON 20 SEP 2005

     FILE 'USPATFULL, USPAT2' ENTERED AT 14:41:23 ON 20 SEP 2005
L35            78 SEA ABB=ON  PLU=ON  L18
L36         13193 SEA ABB=ON  PLU=ON  G01N033-53?/IPC
L37             1 SEA ABB=ON  PLU=ON  L35 AND L36
L38         23444 SEA ABB=ON  PLU=ON  G01N033-5?/IPC
L39             3 SEA ABB=ON  PLU=ON  L35 AND L38

     FILE 'STNGUIDE' ENTERED AT 14:42:35 ON 20 SEP 2005

     FILE 'USPATFULL, USPAT2' ENTERED AT 14:43:29 ON 20 SEP 2005
                D SCAN L39
                SAVE TEMP L39 FET502USP1/A

     FILE 'STNGUIDE' ENTERED AT 14:44:05 ON 20 SEP 2005
                D SAVED
```

```
     FILE 'WPIX' ENTERED AT 14:53:50 ON 20 SEP 2005
L40         2142 SEA ABB=ON  PLU=ON  (B415 (P) B701 (P) B713 (P) B815 (P) B831
                 (P) H1 (P) J011)/M0,M1,M2,M3,M4,M5,M6
L41            1 SEA ABB=ON  PLU=ON  L40 AND L5
L42        63776 SEA ABB=ON  PLU=ON  G01N033-5?/IPC
L43        17781 SEA ABB=ON  PLU=ON  (B11-C08E OR C11-C08E OR E11-C08E)/MC
L44        31675 SEA ABB=ON  PLU=ON  S03-E14H/MC
L45          127 SEA ABB=ON  PLU=ON  L40 AND (L42 OR L43 OR L44)
L46          119 SEA ABB=ON  PLU=ON  L45 AND (L42 OR L44)
L47        29713 SEA ABB=ON  PLU=ON  G01N033-53/IPC
L48           87 SEA ABB=ON  PLU=ON  L46 AND (L47 OR L44)
L49           62 SEA ABB=ON  PLU=ON  L48 AND L47
L50          408 SEA ABB=ON  PLU=ON  C08F030-02/IPC
L51            1 SEA ABB=ON  PLU=ON  L49 AND L50
L52           36 SEA ABB=ON  PLU=ON  L49 AND (?ASSAY?/BIX OR ?IMMUNO?/BIX OR
                 ?AGGLUT?/BIX OR ELISA/BIX OR RIA/BIX)
                 D TRI 1-3

     FILE 'STNGUIDE' ENTERED AT 14:58:14 ON 20 SEP 2005

     FILE 'WPIX' ENTERED AT 14:58:44 ON 20 SEP 2005

     FILE 'STNGUIDE' ENTERED AT 14:59:18 ON 20 SEP 2005

     FILE 'WPIX' ENTERED AT 15:00:55 ON 20 SEP 2005
L53        34679 SEA ABB=ON  PLU=ON  (A04-A OR B04-C03B OR C04-C03B)/MC
L54            2 SEA ABB=ON  PLU=ON  L52 AND (L50 OR L53)
                 D TRI 1-2
L55            0 SEA ABB=ON  PLU=ON  L52 AND L5
L56            0 SEA ABB=ON  PLU=ON  L49 AND L5
L57        32454 SEA ABB=ON  PLU=ON  G01N033-53?/IPC
L58           67 SEA ABB=ON  PLU=ON  L40 AND L57
L*** DEL       0 S K40 AND (G01N033-53?/ICM,ICS)
L59           58 SEA ABB=ON  PLU=ON  L40 AND (G01N033-53?/ICM,ICS)
                 D QUE
L60           35 SEA ABB=ON  PLU=ON  L59 AND ((?ASSAY?/BIX OR ?IMMUNO?/BIX OR
                 ?AGGLUT?/BIX OR ELISA/BIX OR RIA/BIX) OR ?COAG?/BIX)
L61            2 SEA ABB=ON  PLU=ON  L60 AND L50
L62            2 SEA ABB=ON  PLU=ON  L59 AND L50
                 D TRI 1-2
                 SAVE TEMP L62 FET502WPI1/A

     FILE 'STNGUIDE' ENTERED AT 15:07:37 ON 20 SEP 2005
                 D SAVED
                 D QUE L29

     FILE 'HCAPLUS' ENTERED AT 15:08:56 ON 20 SEP 2005
L63              QUE ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR ELISA
                 OR RIA OR ?COAG?
                 SAVE TEMP L63 FET502QUE1/Q

     FILE 'STNGUIDE' ENTERED AT 15:09:24 ON 20 SEP 2005
                 D SAVED

     FILE 'REGISTRY' ENTERED AT 15:10:06 ON 20 SEP 2005
L64              ANALYZE PLU=ON  L18 1- LC :      17 TERMS
                 D

     FILE 'TOXCENTER' ENTERED AT 15:12:10 ON 20 SEP 2005
L65           260 SEA ABB=ON  PLU=ON  L18
```

```
L66          31 SEA ABB=ON  PLU=ON  L65 AND L63
                SAVE TEMP L66 FET502TOX1/A

     FILE 'STNGUIDE' ENTERED AT 15:12:53 ON 20 SEP 2005
                D SAVED

     FILE 'MEDLINE' ENTERED AT 15:13:17 ON 20 SEP 2005
                E IMMUNOASSAY/CT
                E E121+ALL
                E AGGLUTINATION/CT
                E E167+ALL
L67          55 SEA ABB=ON  PLU=ON  L18
L68      282436 SEA ABB=ON  PLU=ON  IMMUNOASSAY+PFT,NT/CT
L69        6576 SEA ABB=ON  PLU=ON  AGGLUTINATION+PFT,NT/CT
L70           3 SEA ABB=ON  PLU=ON  L67 AND (L68 OR L69)
L71          21 SEA ABB=ON  PLU=ON  L67 AND L63
L72          21 SEA ABB=ON  PLU=ON  (L70 OR L71)
                D TRI 1-21

     FILE 'STNGUIDE' ENTERED AT 15:14:56 ON 20 SEP 2005

     FILE 'MEDLINE' ENTERED AT 15:16:05 ON 20 SEP 2005
                SAVE TEMP L72 FET502MED1/A

     FILE 'STNGUIDE' ENTERED AT 15:16:22 ON 20 SEP 2005
                D SAVED

     FILE 'EMBASE' ENTERED AT 15:16:43 ON 20 SEP 2005
L73           0 SEA ABB=ON  PLU=ON  L18

     FILE 'STNGUIDE' ENTERED AT 15:16:59 ON 20 SEP 2005

     FILE 'REGISTRY' ENTERED AT 15:17:59 ON 20 SEP 2005
                D ALL L64
                D L64 1-17

     FILE 'EMBASE' ENTERED AT 15:19:37 ON 20 SEP 2005
                SAVE TEMP L73 FET502EMB1/A

     FILE 'STNGUIDE' ENTERED AT 15:20:00 ON 20 SEP 2005

     FILE 'BIOSIS, CANCERLIT' ENTERED AT 15:20:16 ON 20 SEP 2005
L74          57 SEA ABB=ON  PLU=ON  L18
L75          13 SEA ABB=ON  PLU=ON  L74 AND L63
                SAVE TEMP L75 FET502MUL1/A
                D SCAN

     FILE 'STNGUIDE' ENTERED AT 15:21:38 ON 20 SEP 2005
                D SAVED

     FILE 'HCAPLUS, TOXCENTER, WPIX, MEDLINE, BIOSIS, CANCERLIT, EMBASE,
     PASCAL, JICST-EPLUS, DRUGU, BIOTECHNO, BIOTECHDS, SCISEARCH, CONF,
     CONFSCI, DISSABS' ENTERED AT 15:25:01 ON 20 SEP 2005
L76        1325 SEA ABB=ON  PLU=ON  SUMIDA, K?/AU
L77       17872 SEA ABB=ON  PLU=ON  WADA, K?/AU
L78       14175 SEA ABB=ON  PLU=ON  ISHIHARA, K?/AU
L79        3656 SEA ABB=ON  PLU=ON  (L76 OR L77 OR L78) AND L63
L80          12 SEA ABB=ON  PLU=ON  L79 AND WAKO/CS,SO,PA
L81           6 DUP REM L80 (6 DUPLICATES REMOVED)
                    ANSWERS '1-3' FROM FILE HCAPLUS
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                ANSWERS '4-5' FROM FILE BIOSIS
                ANSWER '6' FROM FILE PASCAL
          D SCAN
          SAVE TEMP L81 FET502MULINV/A
          D SAVED

FILE 'STNGUIDE' ENTERED AT 15:29:29 ON 20 SEP 2005

FILE 'LREGISTRY' ENTERED AT 15:30:14 ON 20 SEP 2005

FILE 'REGISTRY' ENTERED AT 15:30:17 ON 20 SEP 2005

FILE 'ZCAPLUS' ENTERED AT 15:30:20 ON 20 SEP 2005

FILE 'USPATFULL' ENTERED AT 15:30:25 ON 20 SEP 2005

FILE 'USPAT2' ENTERED AT 15:30:29 ON 20 SEP 2005

FILE 'HCAPLUS' ENTERED AT 15:30:32 ON 20 SEP 2005

FILE 'TOXCENTER' ENTERED AT 15:30:36 ON 20 SEP 2005

FILE 'WPIX' ENTERED AT 15:30:39 ON 20 SEP 2005

FILE 'MEDLINE' ENTERED AT 15:30:45 ON 20 SEP 2005

FILE 'BIOSIS' ENTERED AT 15:30:48 ON 20 SEP 2005

FILE 'CANCERLIT' ENTERED AT 15:30:52 ON 20 SEP 2005

FILE 'EMBASE' ENTERED AT 15:30:54 ON 20 SEP 2005

FILE 'PASCAL' ENTERED AT 15:30:58 ON 20 SEP 2005

FILE 'JICST-EPLUS' ENTERED AT 15:31:01 ON 20 SEP 2005

FILE 'DRUGU' ENTERED AT 15:31:04 ON 20 SEP 2005

FILE 'BIOTECHNO' ENTERED AT 15:31:09 ON 20 SEP 2005

FILE 'BIOTECHDS' ENTERED AT 15:31:13 ON 20 SEP 2005

FILE 'SCISEARCH' ENTERED AT 15:31:22 ON 20 SEP 2005

FILE 'CONF' ENTERED AT 15:31:24 ON 20 SEP 2005

FILE 'CONFSCI' ENTERED AT 15:31:29 ON 20 SEP 2005

FILE 'DISSABS' ENTERED AT 15:31:36 ON 20 SEP 2005

FILE 'STNGUIDE' ENTERED AT 15:31:38 ON 20 SEP 2005
          D QUE STAT L13
          D QUE STAT L18
          D L64 1-17
          D QUE NOS L33
          D QUE NOS L39
          D QUE NOS L62
          D QUE NOS L66
          D QUE NOS L72
          D QUE NOS L73
```

D QUE NOS L75

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS, CANCERLIT' ENTERED AT 15:33:39 ON 20 SEP 2005
L82 70 DUP REM L33 L39 L62 L66 L72 L73 L75 (23 DUPLICATES REMOVED)
ANSWERS '1-23' FROM FILE HCAPLUS
ANSWERS '24-26' FROM FILE USPATFULL
ANSWER '27' FROM FILE WPIX
ANSWERS '28-57' FROM FILE TOXCENTER
ANSWERS '58-67' FROM FILE MEDLINE
ANSWERS '68-70' FROM FILE BIOSIS

FILE 'STNGUIDE' ENTERED AT 15:34:17 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT 15:34:35 ON 20 SEP 2005
D IBIB ED AB HITIND HITSTR RETABLE

FILE 'STNGUIDE' ENTERED AT 15:34:36 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT 15:34:58 ON 20 SEP 2005
D IBIB ED AB HITIND HITSTR RETABLE 2-23

FILE 'STNGUIDE' ENTERED AT 15:35:09 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT 15:35:41 ON 20 SEP 2005
D IBIB AB HITSTR 24-26

FILE 'STNGUIDE' ENTERED AT 15:35:44 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT 15:36:20 ON 20 SEP 2005
D IALL ABEQ TECH ABEX 27

FILE 'STNGUIDE' ENTERED AT 15:36:23 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT 15:36:55 ON 20 SEP 2005
D IBIB ED AB HITIND 28

FILE 'STNGUIDE' ENTERED AT 15:36:56 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT 15:37:26 ON 20 SEP 2005

FILE 'STNGUIDE' ENTERED AT 15:37:30 ON 20 SEP 2005

FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' ENTERED AT 15:37:46 ON 20 SEP 2005
D IBIB ED AB HITIND 29-

FILE 'STNGUIDE' ENTERED AT 15:37:53 ON 20 SEP 2005
D QUE L81

FILE 'HCAPLUS, BIOSIS, PASCAL' ENTERED AT 15:39:22 ON 20 SEP 2005
D IBIB ED AB L81 1-6

FILE 'STNGUIDE' ENTERED AT 15:39:24 ON 20 SEP 2005

```
FILE 'STNGUIDE' ENTERED AT 15:39:41 ON 20 SEP 2005
           D QUE STAT L13
           D QUE STAT L18
           D QUE NOS L33
           D QUE NOS L39
           D QUE NOS L62
           D QUE NOS L66
           D QUE NOS L72
           D QUE NOS L73
           D QUE NOS L75
           D QUE NOS L81
           D L64 1-17


FILE HOME

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).

FILE HCAPLUS

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FILE COVERS 1907 - 20 Sep 2005  VOL 143 ISS 13
FILE LAST UPDATED: 19 Sep 2005  (20050919/ED)

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FILE ZCAPLUS

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FILE LAST UPDATED: 19 Sep 2005  (20050919/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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```

FILE WPIX
FILE LAST UPDATED: 15 SEP 2005 <20050915/UP>
MOST RECENT DERWENT UPDATE: 200559 <200559/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE http://thomsonderwent.com/coverage/latestupdates/ <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER GUIDES, PLEASE VISIT:
http://thomsonderwent.com/support/userguides/ <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX FIRST VIEW - FILE WPIFV.
FOR FURTHER DETAILS: http://www.thomsonderwent.com/dwpifv <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-rev
FOR DETAILS. <<<

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 19 SEP 2005 HIGHEST RN 863478-08-4
DICTIONARY FILE UPDATES: 19 SEP 2005 HIGHEST RN 863478-08-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

FILE LREGISTRY
LREGISTRY IS A STATIC LEARNING FILE

NEW CAS INFORMATION USE POLICIES, ENTER HELP USAGETERMS FOR DETAILS.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 15 Sep 2005 (20050915/PD)
FILE LAST UPDATED: 15 Sep 2005 (20050915/ED)
HIGHEST GRANTED PATENT NUMBER: US6944881
HIGHEST APPLICATION PUBLICATION NUMBER: US2005204445
CA INDEXING IS CURRENT THROUGH 15 Sep 2005 (20050915/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Sep 2005 (20050915/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
>>> enter this cluster. <<<
>>> <<<
>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

FILE USPAT2

FILE COVERS 2001 TO PUBLICATION DATE: 15 Sep 2005 (20050915/PD)
FILE LAST UPDATED: 15 Sep 2005 (20050915/ED)
HIGHEST GRANTED PATENT NUMBER: US2005193552
HIGHEST APPLICATION PUBLICATION NUMBER: US2005204275
CA INDEXING IS CURRENT THROUGH 15 Sep 2005 (20050915/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Sep 2005 (20050915/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

USPAT2 is a companion file to USPATFULL. USPAT2 contains full text
of the latest US publications, starting in 2001, for the inventions
covered in USPATFULL. USPATFULL contains full text of the original
published US patents from 1971 to date and the original applications
from 2001. In addition, a USPATFULL record for an invention contains
a complete list of publications that may be searched in standard
search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through
the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees,
classifications, or claims, that may potentially change from the

earliest to the latest publication.

FILE TOXCENTER

FILE COVERS 1907 TO 20 Sep 2005 (20050920/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TOXCENTER has been enhanced with new files segments and search fields. See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary. See http://www.nlm.nih.gov/mesh/ and http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html for a description of changes.

FILE MEDLINE
FILE LAST UPDATED: 17 SEP 2005 (20050917/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE
FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 14 September 2005 (20050914/ED)

FILE RELOADED: 19 October 2003.

FILE CANCERLIT
FILE COVERS 1963 TO 15 Nov 2002 (20021115/ED)

On July 28, 2002, CANCERLIT was reloaded. See HELP RLOAD for details.

CANCERLIT thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE PASCAL
FILE LAST UPDATED: 19 SEP 2005 <20050919/UP>
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE IN THE BASIC INDEX (/BI) FIELD <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 19 SEP 2005 (20050919/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE DRUGU
FILE LAST UPDATED: 20 SEP 2005 <20050920/UP>
>>> DERWENT DRUG FILE (SUBSCRIBER) <<<

>>> FILE COVERS 1983 TO DATE <<<
>>> THESAURUS AVAILABLE IN /CT <<<

FILE BIOTECHNO
FILE LAST UPDATED: 7 JAN 2004 <20040107/UP>
FILE COVERS 1980 TO 2003.

>>> BIOTECHNO IS NO LONGER BEING UPDATED AS OF 2004 <<<

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN /CT AND BASIC INDEX <<<

FILE BIOTECHDS
FILE LAST UPDATED: 14 SEP 2005 <20050914/UP>

>>> USE OF THIS FILE IS LIMITED TO BIOTECH SUBSCRIBERS <<<

>>> NEW CLASSIFICATION SYSTEM FROM 2002 ONWARDS - SEE HELP CLA <<<

>>> NEW DISPLAY FIELDS LS AND LS2 (LEGAL STATUS DATA FROM THE INPADOC DATABASE) AVAILABLE - SEE NEWS <<<

FILE SCISEARCH

FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE CONF
FILE LAST UPDATED: 16 SEP 2005 <20050916/UP>
FILE COVERS 1976 TO DATE.

FILE CONFSCI
FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

FILE DISSABS

FILE COVERS 1861 TO 26 AUG 2005 (20050826/ED)

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=> fil lreg
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STRUCTURE FILE UPDATES:   19 SEP 2005  HIGHEST RN 863478-08-4
DICTIONARY FILE UPDATES:  19 SEP 2005  HIGHEST RN 863478-08-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

  Please note that search-term pricing does apply when
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**********************************************************************
*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,    *
* effective March 20, 2005.  A new display format, IDERL, is now     *
* available and contains the CA role and document type information. *
*                                                                    *
**********************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
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=> fil zcap
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FILE LAST UPDATED: 19 Sep 2005 (20050919/ED)

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=> fil uspatfull
FILE 'USPATFULL' ENTERED AT 15:30:25 ON 20 SEP 2005
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FILE LAST UPDATED: 15 Sep 2005 (20050915/ED)
HIGHEST GRANTED PATENT NUMBER: US6944881
HIGHEST APPLICATION PUBLICATION NUMBER: US2005204445
CA INDEXING IS CURRENT THROUGH 15 Sep 2005 (20050915/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Sep 2005 (20050915/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
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FILE COVERS 2001 TO PUBLICATION DATE: 20 Sep 2005 (20050920/PD)
FILE LAST UPDATED: 20 Sep 2005 (20050920/ED)
HIGHEST GRANTED PATENT NUMBER: US2005159081
HIGHEST APPLICATION PUBLICATION NUMBER: US2005204275
CA INDEXING IS CURRENT THROUGH 20 Sep 2005 (20050920/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 20 Sep 2005 (20050920/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2005

USPAT2 is a companion file to USPATFULL. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. USPATFULL contains full text of the original published US patents from 1971 to date and the original applications from 2001. In addition, a USPATFULL record for an invention contains a complete list of publications that may be searched in standard search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees, classifications, or claims, that may potentially change from the earliest to the latest publication.

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FILE LAST UPDATED: 19 Sep 2005 (20050919/ED)

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TOXCENTER has been enhanced with new files segments and search fields. See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary. See http://www.nlm.nih.gov/mesh/ and http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html for a description of changes.

```
=> fil wpix
FILE 'WPIX' ENTERED AT 15:30:39 ON 20 SEP 2005
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FILE LAST UPDATED:          15 SEP 2005      <20050915/UP>
MOST RECENT DERWENT UPDATE:     200559        <200559/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
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    http://thomsonderwent.com/coverage/latestupdates/           <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://thomsonderwent.com/support/userguides/               <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
    FIRST VIEW - FILE WPIFV.
    FOR FURTHER DETAILS: http://www.thomsonderwent.com/dwpifv  <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
    PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/
    FOR DETAILS. <<<

=> fil medline
FILE 'MEDLINE' ENTERED AT 15:30:45 ON 20 SEP 2005

 FILE LAST UPDATED: 17 SEP 2005 (20050917/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> fil biosis
FILE 'BIOSIS' ENTERED AT 15:30:48 ON 20 SEP 2005
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 14 September 2005 (20050914/ED)
```

FILE RELOADED: 19 October 2003.

=> fil cancerlit
FILE 'CANCERLIT' ENTERED AT 15:30:52 ON 20 SEP 2005

FILE COVERS 1963 TO 15 Nov 2002 (20021115/ED)

On July 28, 2002, CANCERLIT was reloaded. See HELP RLOAD for details.

CANCERLIT thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> fil embase
FILE 'EMBASE' ENTERED AT 15:30:54 ON 20 SEP 2005
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FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

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=> fil pascal
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FILE LAST UPDATED: 19 SEP 2005 <20050919/UP>
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
IN THE BASIC INDEX (/BI) FIELD <<<

=> fil jicst
FILE 'JICST-EPLUS' ENTERED AT 15:31:01 ON 20 SEP 2005
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FILE COVERS 1985 TO 19 SEP 2005 (20050919/ED)

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=> fil drugu
FILE 'DRUGU' ENTERED AT 15:31:04 ON 20 SEP 2005
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FILE LAST UPDATED: 20 SEP 2005 <20050920/UP>
>>> DERWENT DRUG FILE (SUBSCRIBER) <<<

>>> FILE COVERS 1983 TO DATE <<<
>>> THESAURUS AVAILABLE IN /CT <<<

```
=> fil biotechno
FILE 'BIOTECHNO' ENTERED AT 15:31:09 ON 20 SEP 2005
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FILE LAST UPDATED: 7 JAN 2004       <20040107/UP>
FILE COVERS 1980 TO 2003.

>>>  BIOTECHNO IS NO LONGER BEING UPDATED AS OF 2004  <<<

>>>  SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
     /CT AND BASIC INDEX  <<<

=> fil biotechds
FILE 'BIOTECHDS' ENTERED AT 15:31:13 ON 20 SEP 2005
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FILE LAST UPDATED: 14 SEP 2005       <20050914/UP>

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>>> NEW CLASSIFICATION SYSTEM FROM 2002 ONWARDS - SEE HELP CLA <<<

>>> NEW DISPLAY FIELDS LS AND LS2 (LEGAL STATUS DATA FROM
    THE INPADOC DATABASE) AVAILABLE   -   SEE NEWS <<<

=> fil scisearch
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=> file stnguide
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).

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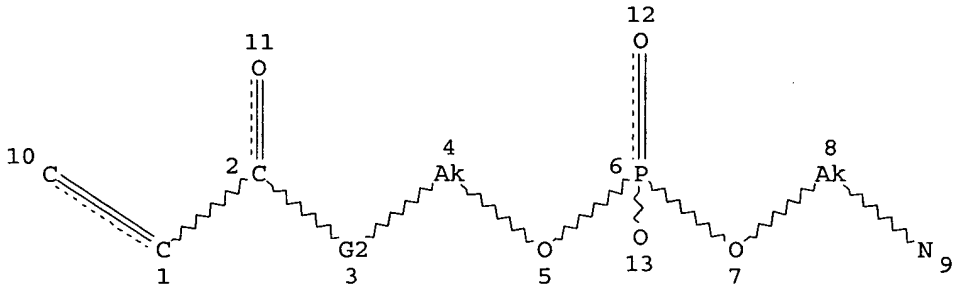
L11 STR



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
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SEARCH TIME: 00.00.03

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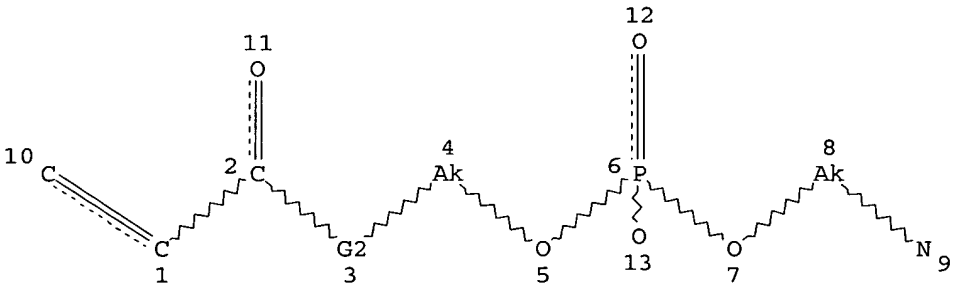

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STEREO ATTRIBUTES: NONE
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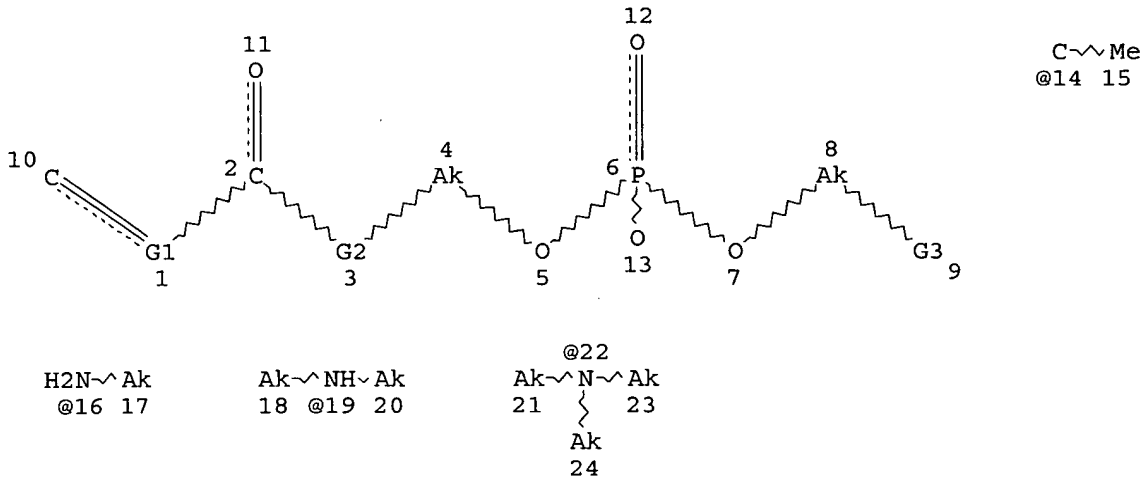
L16 STR



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STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 832 ITERATIONS 553 ANSWERS
SEARCH TIME: 00.00.01

=> d l64 1-17
L64 ANALYZE L18 1- LC : 17 TERMS

TERM #	# OCC	# DOC	% DOC	LC
1	535	535	96.75	CA
2	535	535	96.75	CAPLUS
3	255	255	46.11	TOXCENTER
4	115	115	20.80	USPATFULL
5	29	29	5.24	USPAT2
6	3	3	0.54	BIOSIS
7	3	3	0.54	CHEMLIST
8	3	3	0.54	MEDLINE
9	2	2	0.36	CASREACT
10	2	2	0.36	DIOGENES
11	2	2	0.36	IPA
12	2	2	0.36	TSCA
13	1	1	0.18	BIOBUSINESS
14	1	1	0.18	CANCERLIT
15	1	1	0.18	CHEMINFORMRX

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    16       1       1   0.18 PIRA
    17       1       1   0.18 PROMT
*********  END OF L64***


=> d que nos l33
L11             STR
L13           832 SEA FILE=REGISTRY SSS FUL L11
L16             STR
L18           553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L24           715 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18
L25         56930 SEA FILE=HCAPLUS ABB=ON  PLU=ON  IMMUNOASSAY+PFT,NT/CT
L26         47927 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "IMMUNOCHEMICAL ANALYSIS (L)
                  IMMUNOASSAY"+PFT,NT/CT
L27          5294 SEA FILE=HCAPLUS ABB=ON  PLU=ON  AGGLUTINATION+PFT,NT/CT
L28            17 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND (L25 OR L26 OR L27)
L29             QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                  LISA OR RIA
L31            16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 (L) L29
L33            23 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 OR L31


=> d his l39

     (FILE 'USPATFULL, USPAT2' ENTERED AT 14:41:23 ON 20 SEP 2005)
L39             3 S L35 AND L38

=> d que nos l39
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L16             STR
L18           553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L35            78 SEA L18
L38         23444 SEA G01N033-5?/IPC
L39             3 SEA L35 AND L38


=> d que nos l62
L40          2142 SEA FILE=WPIX ABB=ON  PLU=ON  (B415 (P) B701 (P) B713 (P) B815
                  (P) B831 (P) H1 (P) J011)/MO,M1,M2,M3,M4,M5,M6
L50           408 SEA FILE=WPIX ABB=ON  PLU=ON  C08F030-02/IPC
L59            58 SEA FILE=WPIX ABB=ON  PLU=ON  L40 AND (G01N033-53?/ICM,ICS)
L62             2 SEA FILE=WPIX ABB=ON  PLU=ON  L59 AND L50


=> d que nos l66
L11             STR
L13           832 SEA FILE=REGISTRY SSS FUL L11
L16             STR
L18           553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63             QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                  LISA OR RIA OR ?COAG?
L65           260 SEA FILE=TOXCENTER ABB=ON  PLU=ON  L18
L66            31 SEA FILE=TOXCENTER ABB=ON  PLU=ON  L65 AND L63


=> d que nos l72
L11             STR
L13           832 SEA FILE=REGISTRY SSS FUL L11
L16             STR
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L63              QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
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L67           55 SEA FILE=MEDLINE ABB=ON  PLU=ON  L18
L68       282436 SEA FILE=MEDLINE ABB=ON  PLU=ON  IMMUNOASSAY+PFT,NT/CT
L69         6576 SEA FILE=MEDLINE ABB=ON  PLU=ON  AGGLUTINATION+PFT,NT/CT
L70            3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L67 AND (L68 OR L69)
L71           21 SEA FILE=MEDLINE ABB=ON  PLU=ON  L67 AND L63
L72           21 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L70 OR L71)


=> d que nos l73
L11              STR
L13          832 SEA FILE=REGISTRY SSS FUL L11
L16              STR
L18          553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L73            0 SEA FILE=EMBASE ABB=ON  PLU=ON  L18


=> d his l75

     (FILE 'BIOSIS, CANCERLIT' ENTERED AT 15:20:16 ON 20 SEP 2005)
L75           13 S L74 AND L63

=> d que nos l75
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L13          832 SEA FILE=REGISTRY SSS FUL L11
L16              STR
L18          553 SEA FILE=REGISTRY SUB=L13 SSS FUL L16
L63              QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                 LISA OR RIA OR ?COAG?
L74           57 SEA L18
L75           13 SEA L74 AND L63


=> dup rem l33 l39 l62 l66 l72 l73 l75
L73 HAS NO ANSWERS
FILE 'HCAPLUS' ENTERED AT 15:33:39 ON 20 SEP 2005
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FILE 'CANCERLIT' ENTERED AT 15:33:39 ON 20 SEP 2005
PROCESSING COMPLETED FOR L33
PROCESSING COMPLETED FOR L39
PROCESSING COMPLETED FOR L62
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```
PROCESSING COMPLETED FOR L66
PROCESSING COMPLETED FOR L72
PROCESSING COMPLETED FOR L73
PROCESSING COMPLETED FOR L75
L82           70 DUP REM L33 L39 L62 L66 L72 L73 L75 (23 DUPLICATES REMOVED)
                 ANSWERS '1-23' FROM FILE HCAPLUS
                 ANSWERS '24-26' FROM FILE USPATFULL
                 ANSWER '27' FROM FILE WPIX
                 ANSWERS '28-57' FROM FILE TOXCENTER
                 ANSWERS '58-67' FROM FILE MEDLINE
                 ANSWERS '68-70' FROM FILE BIOSIS

=> file stnguide
FILE 'STNGUIDE' ENTERED AT 15:34:17 ON 20 SEP 2005
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).
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=> d ibib ed ab hitind hitstr retable
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 1 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2004:264055 HCAPLUS
DOCUMENT NUMBER: 141:3747
TITLE: Evaluation of 2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for immunoassay of C-reactive protein detection
AUTHOR(S): Park, Jongwon; Kurosawa, Shigeru; Watanabe, Junji; Ishihara, Kazuhiko
CORPORATE SOURCE: Department of Materials Engineering, School of Engineering, University of Tokyo, Tokyo, Japan
SOURCE: Analytical Chemistry (2004), 76(9), 2649-2655
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 01 Apr 2004
AB To prepare novel 2-methacryloyloxyethyl phosphorylcholine (MPC)-polymeric nanoparticle (MPC-PNP), water-soluble amphiphilic phospholipid polymer, poly [MPC-co-Bu methacrylate (BMA)-co-p-nitrophenyloxycarbonyl poly(ethylene glycol) methacrylate (MEONP) (PMBN)], which has active ester groups for bioconjugation on the side chains, was synthesized. MPC-PNP was prepared by a solvent evaporation technique where the poly(L-lactic acid) was used as core and PMBN was applied as an emulsifier and a surface modifier under systematical design of well-arranged phospholipids polar groups in its surface. Characteristics for MPC-PNP were thoroughly investigated with dynamic light scattering, electrophoresis light scattering, XPS, and field emission SEM measurements. Through a protein adsorption test, the phosphorylcholine group on the surface of MPC-PNPs, which had their active ester groups substituted by glycine, were shown to suppress the nonspecific adsorption of bovine serum albumin. These particles were used for C-reactive protein (CRP) detection, where anti-CRP monoclonal antibodies were immobilized on the MPC-PNP using the active ester group, while the remaining active ester groups were thoroughly reacted with glycine. The detection limit about serum-free CRP in the calibration curve was shown to extend from 0.01 to 10 mg/dL when anti-CRP antibody immobilized MPC-PNP was used for serum-free CRP detection. This compares favorably with measurement using polystyrene nanoparticles that were shown to detect from 0.1 to 10 mg/dL by an immunoagglutination technique. Also, for the detection of CRP in serum, MPC-PNP was shown to give the same calibration curve explained by the efficient suppression of nonspecific binding. Furthermore, denaturation of immobilizing anti-CRP antibody on the MPC-PNP hardly occurred despite increasing the temperature It is concluded that MPC-PNP is unique due to the design of its interfacial properties, also it will perform well in a diagnostic immunoassay because of its optimized material properties.
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 13, 15
IT **Immunoassay**
Scanning electron microscopy
(2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for immunoassay of C-reactive protein detection)
IT **685901-25-1P**
RL: ARU (Analytical role, unclassified); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES

(Uses)
(2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for **immunoassay** of C-reactive protein detection)

IT **685901-25-1P**
RL: ARU (Analytical role, unclassified); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(2-methacryloyloxyethyl phosphorylcholine polymeric nanoparticle for **immunoassay** of C-reactive protein detection)

RN 685901-25-1 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate and α-(2-methyl-1-oxo-2-propenyl)-ω-[[(4-nitrophenoxy)carbonyl]oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

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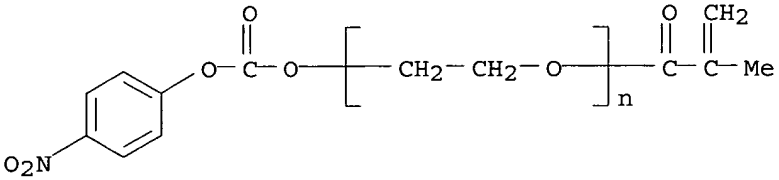
CRN 666711-01-9
CMF (C2 H4 O)n C11 H9 N O6
CCI PMS



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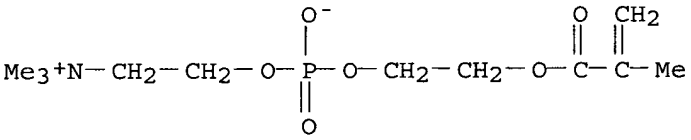
CRN 67881-98-5
CMF C11 H22 N O6 P



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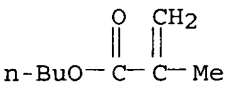

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File

Aceti, A	1991	22	135	J Infect	MEDLINE
Akhtar, S	1995	107	209	J Membr Sci	HCAPLUS
Babba, H	1994	50	64	Am J Trop Med	MEDLINE
Bangs, L	1996	69	1873	Pure Appl Chem	
Biasucci, L	1999	99	855	Circulation	MEDLINE
Bundy, J	1999	71	1460	Anal Chem	HCAPLUS
Chen, J	2001	17	369	Biotechnol Prog	HCAPLUS
de Winter, R	1999	42	240	Cardiovasc Res	HCAPLUS
Diamandis, E	1990	194	19	Clin Chim Acta	HCAPLUS
Elvassore, N	2001	40	795	Ind Eng Chem Res	HCAPLUS
Ghourchian, H	1997	41	401	Talanta	
Haverkate, F	1997	349	462	Lancet	MEDLINE
Hayward, J	1984	5	135	Biomaterials	HCAPLUS
Hirsch, L	2003	75	2377	Anal Chem	HCAPLUS
Holownia, P	2001	73	3426	Anal Chem	HCAPLUS
Ishihara, K	1999	10	1047	J Biomater Sci, Poly	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1992	26	1543	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Kitano, H	2002	104	10425	J Phys Chem B	
Kitano, H	2003	19	10260	Langmuir	HCAPLUS
Koenig, W	1999	99	237	Circulation	MEDLINE
Kurosawa, S	1990	38	1117	Chem Pharm Bull	HCAPLUS
Lu, D	1991	3	127	J Biomater Sci, Poly	HCAPLUS
Molina-Bolivar, J	2001	17	2514	Langmuir	HCAPLUS
Pentikanen, M	2000	247	359	J Intern Med	
Perez-Amodio, S	2001	73	3417	Anal Chem	HCAPLUS
Ridker, P	1998	97	425	Circulation	MEDLINE
Ruiz, L	1998	19	987	Biomaterials	HCAPLUS
Sakai-Kato, K	2002	74	2943	Anal Chem	HCAPLUS
Sakaki, S	1999	47	523	J Biomed Mater Res	HCAPLUS
Singer, S	1972	175	720	Science	HCAPLUS
Velev, O	1999	15	3693	Langmuir	HCAPLUS
Wang, D	2002	2	857	Nano Lett	HCAPLUS
Wang, J	2001	17	5739	Langmuir	HCAPLUS
Whicher, J	1999	37	495	Clin Chem Lab Med	HCAPLUS

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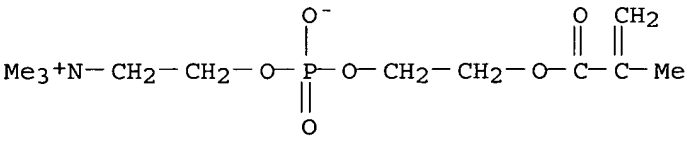
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 2 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2004:1004654 HCAPLUS
DOCUMENT NUMBER: 142:370012
TITLE: Evaluation of a high-affinity QCM immunosensor using antibody fragmentation and 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer
AUTHOR(S): Kurosawa, Shigeru; Nakamura, Miki; Park, Jong-Won; Aizawa, Hidenobu; Yamada, Kazunori; Hirata, Mitsuo
CORPORATE SOURCE: National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, 305-8565, Japan
SOURCE: Biosensors & Bioelectronics (2004), 20(6), 1134-1139
CODEN: BBIOE4; ISSN: 0956-5663
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal

LANGUAGE: English
ED Entered STN: 22 Nov 2004
AB This study evaluated construction of a high affinity quartz crystal microbalance (QCM) immunosensor using anti-C-reactive protein (CRP) antibody and its fragments for CRP detection. Three types of antibody were immobilized on the surface of a QCM via covalent-bounding. Then affinity was evaluated through antigen-antibody binding between CRP and its antibody. Affinity between antigen-antibody was shown to be highest when anti-CRP F(ab')2-IgG antibody (70 μg/mL) was immobilized on the QCM. In case of anti-CRP F(ab')2-IgG antibody, affinity which was attributable to antigen-antibody binding was almost twice that of anti-CRP IgG antibody, which is used conventionally for QCM immunosensors. In addition, when it was treated with 2-methacryloyloxyethyl phosphorylcholine-co-Bu methacrylate, so-called MPC polymer, highly affinitive and selective immunosensing for CRP was achieved without non-specific binding from plasma proteins in human serum. When anti-CRP F(ab')2-IgG antibody was immobilized on the QCM, the detection limit and the linearity of CRP calibration curve were achieved at concns. from 0.001 to 100 μg/dL even during investigation in serum samples. Exptl. results verified the successful construction of a highly affinitive and selective QCM-immunosensor which was modified with anti-CRP F(ab')2-IgG antibody and MPC polymer.
CC 9-1 (Biochemical Methods)
IT **67881-98-5**, 2-Methacryloyloxyethyl phosphorylcholine
RL: TEM (Technical or engineered material use); USES (Uses)
(evaluation of a high-affinity QCM **immunosensor** using antibody fragmentation and 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer)
IT **67881-98-5**, 2-Methacryloyloxyethyl phosphorylcholine
RL: TEM (Technical or engineered material use); USES (Uses)
(evaluation of a high-affinity QCM **immunosensor** using antibody fragmentation and 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer)
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



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Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Abad, J	1998	70	2848	Anal Chem	HCAPLUS
Aizawa, H	2001	76	173	Sens Actuat B	
Borgue, L	2000	46	1839	Clin Chem	
Bunde, R	1998	46	1223	Talanta	HCAPLUS
Chou, S	2002	48	913	Clin Chem	HCAPLUS
Haverkate, F	1997	349	462	Lancet	MEDLINE
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	2000	1	131	Sci Technol Adv Mat	HCAPLUS
Kanai, I	1998			CRP (C-reactive prot	
Koenig, W	1999	99	237	Circulation	MEDLINE

Kurosawa, S	1990	38	1117	Chem Pharm Bull	HCAPLUS
Kurosawa, S	2000	47	1256	IEEE Trans UFFC	
Kurosawa, S	2003	14	1882	Meas Sci Technol	HCAPLUS
Ledue, T	1998	35	745	Annu Clin Biochem	HCAPLUS
Morgan, C	1996	42	193	Clin Chem	HCAPLUS
Muratsugu, M	1993	65	2933	Anal Chem	HCAPLUS
Muratsugu, M	1997	1	99	Colloid Interface Sc	HCAPLUS
Park, J	2003	50	193	IEEE Trans UFFC	
Park, J	2003	91	158	Sens Actuat B	
Pentikanen, M	2000	247	359	J Intern Med	
Ridker, P	1998	97	425	Circulation	MEDLINE
Ridker, P	1997	336	973	N Engl J Med	HCAPLUS
Rifai, N	1999	45	2136	Clin Chem	HCAPLUS
Sakai, G	1995	24-25	134	Sens Actuat B	
Storri, S	1998	13	347	Biosens Bioelectron	HCAPLUS
Thompson, M	1986	58	1206	Anal Chem	HCAPLUS
Uttenthaler, E	2001	16	735	Biosen Bioelectron	HCAPLUS
Whicher, J	1999	37	495	Clin Chem Lab Med	HCAPLUS
Wood, W	2000	46	131	Clin Lab	HCAPLUS
Xia, C	1996	336	185	Anal Chim Acta	

L82 ANSWER 3 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2005:4348 HCAPLUS
DOCUMENT NUMBER: 142:296317
TITLE: Cytokine Adsorptive Property of Various Adsorbents in Immunoadsorption Columns and a Newly Developed Adsorbent: An in vitro Study
AUTHOR(S): Oda, Shigeto; Hirasawa, Hiroyuki; Shiga, Hidetoshi; Nakanishi, Kazuya; Matsuda, Ken-ichi; Nakamura, Masataka; Ikeda, Hiroyuki; Sakai, Masamune
CORPORATE SOURCE: Department of Emergency and Critical Care Medicine, Graduate School of Medicine, Chiba University, Chiba, Japan
SOURCE: Blood Purification (2004), 22(6), 530-536
CODEN: BLPUDO; ISSN: 0253-5068
PUBLISHER: S. Karger AG
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 04 Jan 2005
AB Background/Aims: Cytokines play important roles in the pathophysiol. of systemic inflammatory response syndrome (SIRS) and sepsis. Therefore, some effective measures to remove cytokines from the bloodstream could be effective in the treatment of SIRS and sepsis. The aim of this study was to evaluate the cytokine adsorptive property of various adsorbents for the purpose of the development of new selective cytokine adsorption columns. Methods: The cytokine adsorptive property of adsorbent in a CF-X column, which consists of cellulose beads cross-linked with hexamethylene-di-isocyanate, was compared with those of various adsorbents in currently available immunoadsorption columns, such as Immusorba TR, Immusorba PH, Selesorb, and Lixelle, in vitro batchwise test using patients' plasma. A newly developed adsorbent, MPCF-X, which was modified by coating the surface of the adsorbent in CF-X with 2-methacryloyloxyethyl phosphorylcholine (MPC), was also tested for its cytokine adsorptive property. Results: The adsorbent in CF-X showed a significantly higher adsorption rate for TNF-α, interleukin (IL)-6 and IL-10 compared with other adsorbents. Adsorbent in Lixelle showed good affinity to TNF-α and IL-8. Especially, the adsorbent in CF-X almost completely removed TNF-α, whereas it also had considerable affinity to normal IgG. MPCF-X showed decreased affinity to IgG with considerable adsorptive properties to cytokines. Conclusion: Selective cytokine adsorption

columns could be developed with improvement of currently available adsorbents. Such a new selective cytokine adsorption column could be clin. applied for the treatment of SIRS/sepsis.

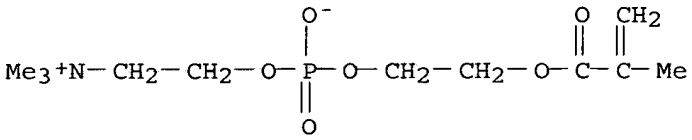
CC 15-1 (Immunochemistry)
Section cross-reference(s): 14

IT **67881-98-5**, 2-Methacryloyloxyethyl phosphorylcholine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(cytokine adsorption by various adsorbents in **immunoadsorption** columns in treatment of sepsis)

IT **67881-98-5**, 2-Methacryloyloxyethyl phosphorylcholine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(cytokine adsorption by various adsorbents in **immunoadsorption** columns in treatment of sepsis)

RN 67881-98-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bellomo, R	1993	21	522	Crit Care Med	MEDLINE
Cain, B	1998	186	337	J Am Coll Surg	MEDLINE
Cole, L	2001	27	978	Intensive Care Med	MEDLINE
De Vriese, A	1999	10	846	J Am Soc Nephrol	MEDLINE
Dinarello, C	1993	269	1829	JAMA	MEDLINE
Heering, P	2003	26	128	Kidney Blood Press R	MEDLINE
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Kutsuki, H	1998	2	18	Ther Apher	HCAPLUS
Matsuda, K	2001	5	306	Ther Apher	HCAPLUS
McMaster, P	2003	4	2	Pediatr Crit Care Me	
Members of American Col	1992	20	864	Crit Care Med	
Nakaji, S	2001	5	301	Ther Apher	HCAPLUS
Oda, S	2002	6	193	Ther Apher	
O'Reilly, M	1999	12	411	Shock	MEDLINE
Ronco, C	2002	30	1250	Crit Care Med	
Ronco, C	2000	76	148	Kidney Int	
Shapiro, L	1993	1	13	New Horiz	MEDLINE
Shetz, M	1995	21	169	Intensive Care Med	
Stegmayr, B	2000	18	149	Blood Purif	MEDLINE
Suzuki, K	2003	7	104	Ther Apher	
Tomyo, M	1996	15	118	Jpn J Apheresis	
Tsuchida, K	2002	10	485	Int J Mol Med	HCAPLUS
Wheeler, A	1999	340	207	N Engl J Med	MEDLINE
Winchester, J	2003	21	79	Blood Purif	HCAPLUS
Winchester, J	2002	137	170	Contrib Nephrol	
Yagihashi, A	2002	6	358	Ther Apher	HCAPLUS
Yoshida, M	1998	2	185	Ther Apher	HCAPLUS

L82 ANSWER 4 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 2003:945791 HCAPLUS
DOCUMENT NUMBER: 140:14529

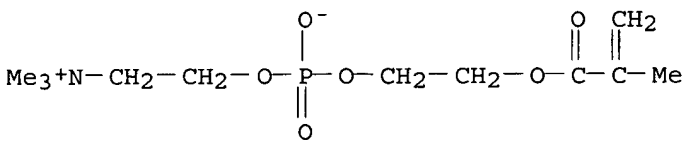
TITLE: Developing solvent, measuring method, and kit for immunochromatography
INVENTOR(S): Mochizuki, Takeshi; Komatsu, Mariko; Sakaki, Shujiro
PATENT ASSIGNEE(S): Taunzu K. K., Japan; NOF Corporation
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003344406	A2	20031203	JP 2002-150996	20020524
PRIORITY APPLN. INFO.:			JP 2002-150996	20020524

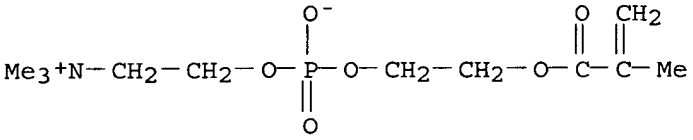
ED Entered STN: 04 Dec 2003

AB An improved developing solvent for an immunochromatog. is provided, with which non-specific aggregation and non-specific reaction upon measurements are prevented, and the measurements are performed with high accuracy. The developing solvent for an immunochromatog. is characterized in that it comprises a buffer containing a polymer possessing phosphorylcholine groups. It is preferable that the polymer is contained in the concentration of 0.005-0.3w/v%, and its number average mol. weight is higher than 40,000. The polymer preferably contains 2-methacryloyloxyethylphosphorylcholine as the constituting monomer, and it can be either a homopolymer or a copolymer.

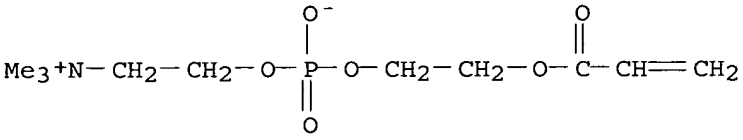
IC ICM G01N033-543
ICS G01N033-531
CC 9-10 (Biochemical Methods)
IT 9005-64-5, Tween 20 26628-22-8, Sodium azide **67881-98-5D**, 2-Methacryloyloxyethylphosphorylcholine, copolymer with methoxypolyethyleneglycolmonomethacrylate, copolymer with methacrylate **67881-98-5D**, 2-Methacryloyloxyethylphosphorylcholine, homopolymer
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(improved developing solvent, measuring method, and kit for **immunochromatog.**)
IT 79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic acid, reactions 25249-16-5, Polyethyleneglycolmonomethacrylate 26403-58-7, Polyethyleneglycolmonoacrylate 26915-72-0, Methoxypolyethyleneglycolmono methacrylate 32171-39-4 **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine **150120-15-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(improved developing solvent, measuring method, and kit for **immunochromatog.**)
IT **67881-98-5D**, 2-Methacryloyloxyethylphosphorylcholine, copolymer with methoxypolyethyleneglycolmonomethacrylate, copolymer with methacrylate
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(improved developing solvent, measuring method, and kit for **immunochromatog.**)
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
150120-15-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(improved developing solvent, measuring method, and kit for **immunochromatog.**)
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 150120-15-3 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 5 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 2002:958988 HCAPLUS
DOCUMENT NUMBER: 138:21783
TITLE: Agglutination-promoting agent for antigen or antibody immunoassay
INVENTOR(S): Kakuta, Kyoichi; Wada, Hiroshi; Ishihara, Kazuhiko
PATENT ASSIGNEE(S): Wako Pure Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

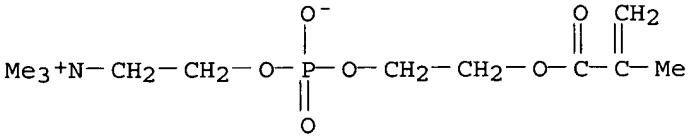
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002365296	A2	20021218	JP 2001-169051	20010605
US 2004157276	A1	20040812	US 2004-626502	20040304

PRIORITY APPLN. INFO.: JP 2001-169051 A 20010605
ED Entered STN: 18 Dec 2002
AB Provided are aggregation-promoting compds. for use in agglutination immunoassay. These compds are branched polymers or copolymers having basic (monomer) structure of OPO2-O-R4-N(R1R2R3) where R1-3 are independently H, OH or alkyl group; and R4 is an alkyl group or alkylene group. The agglutination immunoassay reagent comprises carrier- or latex-immobilized antibody or antigen. The agglutination immunoassay is useful for determination of antigen or antibody, e.g. C-reactive protein, rheumatic factor and prostate-specific antigen.
IC ICM G01N033-531

ICS C08F030-02; G01N033-543
CC 9-10 (Biochemical Methods)
Section cross-reference(s): 15
IT **Immunoassay**
(agglutination test; agglutination-promoting agent for antigen or antibody immunoassay)
IT **Agglutination**
(promoters; agglutination-promoting agent for antigen or antibody immunoassay)
IT **67881-99-6P**, Poly-2-methacryloyloxyethylphosphorylcholine **125275-25-4P**, n-Butyl methacrylate-2-Methacryloyloxyethylphosphorylcholine copolymer **144514-08-9P**, Stearyl methacrylate-2-Methacryloyloxyethylphosphorylcholinecopolymer **313216-64-7P** **478015-82-6P**
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**agglutination**-promoting agent for antigen or antibody **immunoassay**)
IT **67881-99-6P**, Poly-2-methacryloyloxyethylphosphorylcholine **125275-25-4P**, n-Butyl methacrylate-2-Methacryloyloxyethylphosphorylcholine copolymer **144514-08-9P**, Stearyl methacrylate-2-Methacryloyloxyethylphosphorylcholinecopolymer **313216-64-7P** **478015-82-6P**
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**agglutination**-promoting agent for antigen or antibody **immunoassay**)
RN 67881-99-6 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

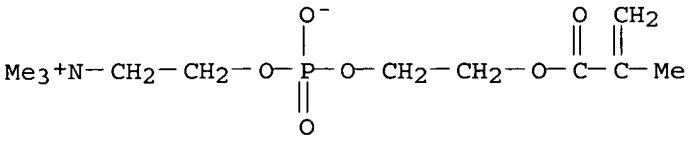
CRN 67881-98-5
CMF C11 H22 N O6 P



RN 125275-25-4 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



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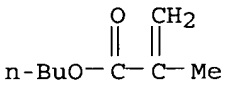
CRN 97-88-1
CMF C8 H14 O2



RN 144514-08-9 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with octadecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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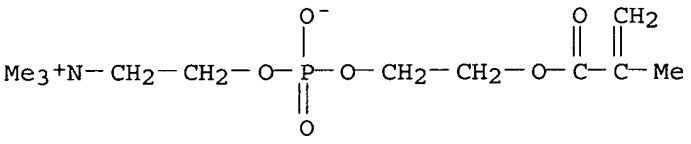
CRN 67881-98-5
CMF C11 H22 N O6 P



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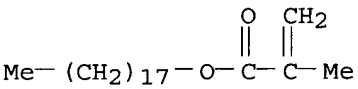
CRN 32360-05-7
CMF C22 H42 O2



RN 313216-64-7 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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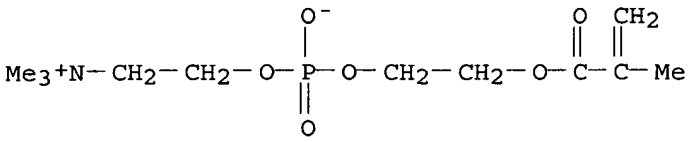
CRN 67881-98-5
CMF C11 H22 N O6 P



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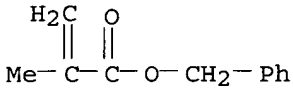
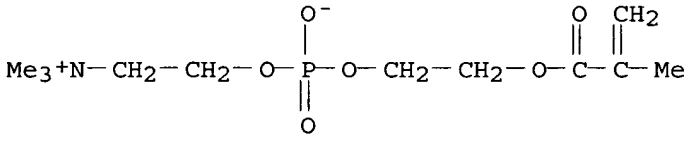
CRN 2495-37-6
CMF C11 H12 O2



RN 478015-82-6 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxy-N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)oxy]-1-propanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 13052-11-4
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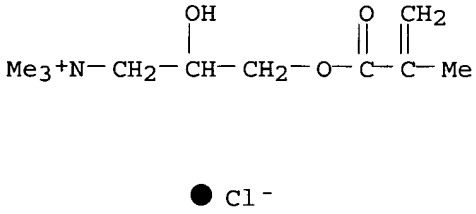
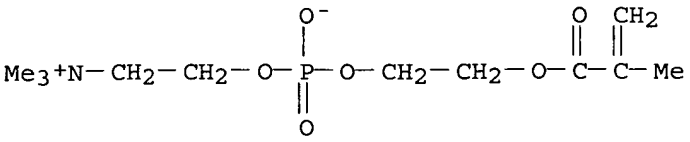


L82 ANSWER 6 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
ACCESSION NUMBER: 1999:680723 HCAPLUS
DOCUMENT NUMBER: 132:32839

TITLE: Stabilization of an antibody conjugated with enzyme by 2-methacryloyloxyethyl phosphorylcholine copolymer in enzyme-linked immunosorbent assay
AUTHOR(S): Sakaki, Shujiro; Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan
SOURCE: Journal of Biomedical Materials Research (1999), 47(4), 523-528
CODEN: JBMRBG; ISSN: 0021-9304
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 27 Oct 1999
AB The purpose of this study was to develop a novel synthetic stabilizer of enzyme-linked antibody in the ELISA. The water-soluble amphiphilic phospholipid polymer, poly[2-methacryloyloxyethyl phosphorylcholine (MPC)-co-styrene (St)] was synthesized, and its stabilizing functions for the antibody were compared with conventional stabilizers of the antibody conjugated with enzyme (enzyme-antibody conjugate), such as bovine serum albumin (BSA) and casein. In the absence of the stabilizer, the remaining immunol. activity decreased to about 10% of its initial value after 37 days. The same tendency was observed even when the enzyme-antibody conjugate in 1.0 wt % BSA solution was used as a stabilizer. In 1.0 wt % casein solution, the immunol. activity decreased to 29% of the initial value after 37 days. On the other hand, in 0.1 wt % and 1.0 wt % poly(MPC-co-St) solution, the activity remained 74% and 92% of the initial value, resp. The effects of poly(MPC-co-St) on the stabilization of the enzyme-antibody conjugate depended on the concentration of poly(MPC-co-St). During the ELISA procedure, not only did poly(MPC-co-St) have no effect on the reaction between the antigen and the antibody, but it also had no effect on the reaction between the enzyme and the substrate. These results indicate that poly(MPC-co-St) has the ability to suppress the denaturation of protein, enzyme, and antibody. We concluded that water-soluble poly(MPC-co-St) is an effective synthetic stabilizer in the ELISA.
CC 9-10 (Biochemical Methods)
IT **Immunoassay**
(enzyme-linked immunosorbent assay; stabilization of an antibody conjugated with enzyme by 2-methacryloyloxyethyl phosphorylcholine copolymer in ELISA)
IT **134483-35-5**
RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); ANST (Analytical study); USES (Uses)
(stabilization of an antibody conjugated with enzyme by 2-methacryloyloxyethyl phosphorylcholine copolymer in **ELISA**)
IT **134483-35-5**
RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); ANST (Analytical study); USES (Uses)
(stabilization of an antibody conjugated with enzyme by 2-methacryloyloxyethyl phosphorylcholine copolymer in **ELISA**)
RN 134483-35-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 100-42-5
CMF C8 H8

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anderton, B	1980	2	122	Immunol Today	
Donovan, J	1975	250	1966	J Biol Chem	HCAPLUS
Farr, A	1981	47	129	J Immunol Meth	HCAPLUS
Ghosh, S	1974	337	395	Biochem Biophys Acta	HCAPLUS
Ikemi, M	1982	15	281	Macromolecules	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1994	32	859	J Polym Sci Polym Ch	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Ishikawa, E	1987	1	238	J Clin Lab Anal	HCAPLUS
Kojima, M	1991	12	121	Biomaterials	HCAPLUS
Naik, D	1975	47	267	Anal Biochem	HCAPLUS
Orci, L	1985	28	528	Diabetologia	HCAPLUS
Osborn, M	1978	77	R27	J Cell Biol	MEDLINE
Sakaki, S	1997		167	Advances in polymeri	
Shaw, D	1980			Introduction to coll	
Wisdom, G	1976	22	1243	Clin Chem	HCAPLUS

L82 ANSWER 7 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:300694 HCAPLUS
DOCUMENT NUMBER: 142:351673
TITLE: Automated analytical method and apparatus
INVENTOR(S): Kurosawa, Shigeru; Aizawa, Hidenobu
PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan
SOURCE: PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005031316	A1	20050407	WO 2004-JP14664	20040929

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-338604 A 20030929

ED Entered STN: 07 Apr 2005

AB An automated anal. method is provided, which comprises making a sample in a container absorbed to a probe, dispensing the sample from the probe to a sensor part equipped with a piezoelec. element for converting the mass change on the sensor into an elec. change such as a basic resonant frequency and quantitating it, performing at least once making the dispensed sample reabsorbed to the probe and re-dispensing the reabsorbed sample to the sensor part, and thereby, promoting the progress of a chemical reaction or else generated on the sensor. Also provided is an automated anal. apparatus used for this method. Diagrams describing the apparatus assembly are given.

IC ICM G01N005-02
ICS G01N001-00; G01N033-543; G01N035-02

CC 9-1 (Biochemical Methods)

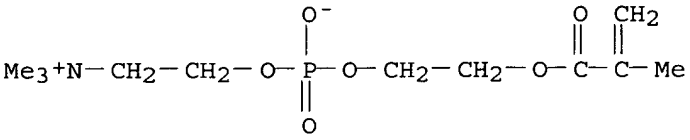
IT **Immunoassay**
(sandwich reaction; automated anal. method using apparatus equipped with piezoelec. element)

IT 56-81-5, Glycerol, analysis **67881-98-5D**, 2-Methacryloyloxyethylphosphorylcholine, polymer 658045-21-7, BlockAce 658051-44-6, StabilGuard
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(automated anal. method using apparatus equipped with piezoelec. element)

IT **67881-98-5D**, 2-Methacryloyloxyethylphosphorylcholine, polymer
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(automated anal. method using apparatus equipped with piezoelec. element)

RN 67881-98-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Aizawa, K	2003		202	Dai 42 Kai Japan Oil	
Beckman Instruments Inc	1999			JP 11-502937 A	
Beckman Instruments Inc	1999			US 2002182117 A1	HCAPLUS
Beckman Instruments Inc	1999			EP 819256 A1	HCAPLUS
Beckman Instruments Inc	1999			AU 9715304 A	HCAPLUS
Beckman Instruments Inc	1999			WO 9726536 A1	HCAPLUS
Koyama, N	2000			JP 2000283905 A	HCAPLUS
Nakamura, K	2002	18	46	Chemical Sensors, Th	

Olympus Optical Co Ltd	1983			JP 58-196461 A	
Toshiba Corp	1993			JP 05-285000 A	HCAPLUS
Totsuka, K	2002	18	73	Chemical Sensors, Th	
Yase, T	2003		58.1	Sogo Kenkyu Project	

L82 ANSWER 8 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:591492 HCAPLUS
DOCUMENT NUMBER: 143:93600
TITLE: Blood-group antibody measurement/identification instrument tool, and method
INVENTOR(S): Ito, Yoshihiro; Yamauchi, Tetsuya; Ishikawa, Yoshihide; Uchikawa, Makoto
PATENT ASSIGNEE(S): Kanagawa Academy of Science and Technology, Japan; Japanese Red Cross Society
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

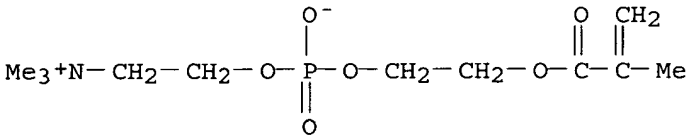
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005181154	A2	20050707	JP 2003-423771	20031219
PRIORITY APPLN. INFO.:			JP 2003-423771	20031219

ED Entered STN: 08 Jul 2005
AB A blood-group antibody measurement/identification instrument tool is provided, with which the quant. measurement of a blood-group antibody is feasible with the less required quantity of panel blood cells than the traditional blood-group plate without requiring a mech. operation such as centrifugation or else. Also provided is a blood-group antibody measurement/identification method using this instrument tool. The instrument tool is constituted by resp. immobilizing multiple kinds of panel blood cells to a different region on a base body through an immobilization agent consisting of a zwitterionic water-soluble polymer or nonionic water-soluble polymer possessing at least two photo-reactive groups in a mol.
IC ICM G01N033-53
ICS C08F220-36; C08F220-60; C12M001-34; G01N021-76; G01N033-543; G01N033-547
CC 9-10 (Biochemical Methods)
IT **Immunoassay**
(blood-group antibody measurement tool using panel blood cells immobilized through photo-reactive water-soluble polymer immobilization agent)
IT **Immunoassay**
(chemiluminescence, enhanced; blood-group antibody measurement tool using panel blood cells immobilized through photo-reactive water-soluble polymer immobilization agent)
IT 6066-82-6, N-Hydroxysuccinimide 6427-66-3, 4-Azido-benzoic acid 14860-64-1, 4-Azido-aniline 18358-13-9, Methacrylate, reactions 25322-68-3, Polyethyleneglycol 34901-14-9 39927-08-7, Poly(ethyleneglycol)bis(carboxymethyl)ether **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine **67881-98-5D**, 2-Methacryloyloxyethylphosphorylcholine, copolymer with photo-reactive methacrylamide derivative **88539-10-0** **150120-15-3** **158760-93-1** 163801-79-4 **179637-06-0** **179953-15-2** 857051-80-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(blood-group antibody measurement tool using panel blood cells

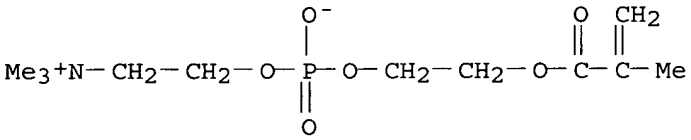
immobilized through photo-reactive water-soluble polymer immobilization agent)

IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
67881-98-5D, 2-Methacryloyloxyethylphosphorylcholine, copolymer with photo-reactive methacrylamide derivative **88539-10-0**
150120-15-3 158760-93-1 179637-06-0
179953-15-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(blood-group antibody measurement tool using panel blood cells immobilized through photo-reactive water-soluble polymer immobilization agent)

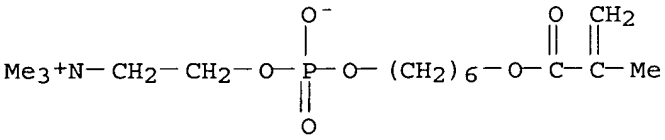
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



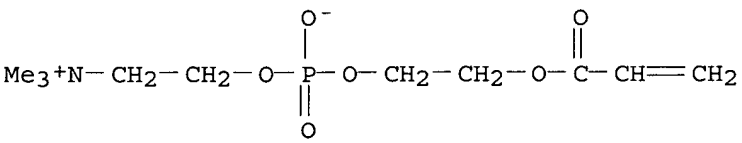
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 88539-10-0 HCAPLUS
CN 3,5,12-Trioxa-4-phosphapentadec-14-en-1-aminium, 4-hydroxy-N,N,N,14-tetramethyl-13-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

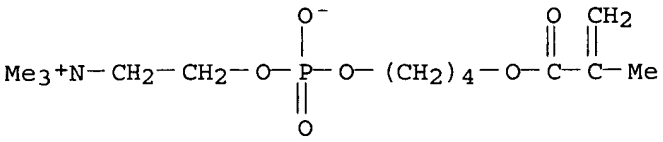


RN 150120-15-3 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

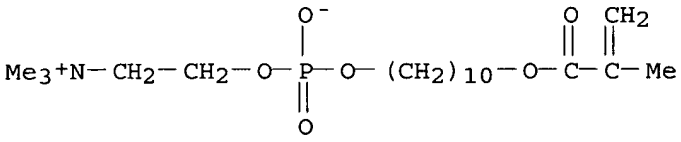


RN 158760-93-1 HCAPLUS

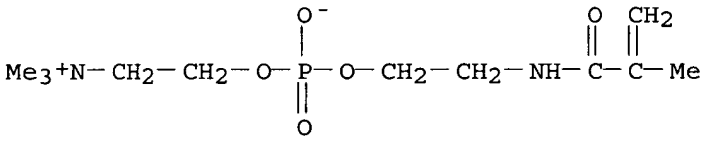
CN 3,5,10-Trioxa-4-phosphatridec-12-en-1-aminium, 4-hydroxy-N,N,N,12-tetramethyl-11-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 179637-06-0 HCAPLUS
CN 3,5,16-Trioxa-4-phosphanonadec-18-en-1-aminium, 4-hydroxy-N,N,N,18-tetramethyl-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 179953-15-2 HCAPLUS
CN 3,5-Dioxa-8-aza-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 9 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:299600 HCAPLUS
DOCUMENT NUMBER: 142:353877
TITLE: Antigen or antibody determination in body fluid with rapid, simple and highly sensitive immunoassay
INVENTOR(S): Ishihara, Kazuhiko; Watanabe, Junji; Kurosawa, Shigeru
PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005091236	A2	20050407	JP 2003-326829	20030918

PRIORITY APPLN. INFO.: JP 2003-326829 20030918
ED Entered STN: 07 Apr 2005
AB Disclosed is a rapid, simple and highly sensitive immunoassay method for detecting antigen and antibody in body fluid. The immunoassay uses polymeric particles or nanoparticles comprising alkyl, hydroxy and aromatic side chain for antigen or antibody immobilization to preserve binding

activity and to reduce nonspecific binding by contaminant proteins. In example, the polymeric nanoparticles were prepared with 2-methacryloyloxyethylphosphorylcholine and Bu methacrylate. The polymeric nanoparticle-immobilized monoclonal antibodies were used for agglutination immunoassay of human C-reactive protein in blood serum.

IC ICM G01N033-543

CC 15-2 (Immunochemistry)
Section cross-reference(s): 9

IT **Immunoassay**
(agglutination test; antigen determination in body fluid with immunoassay comprising polymeric nanoparticle-immobilized antibody)

IT **125275-25-4P**, 2-Methacryloyloxyethylphosphorylcholine-butyl methacrylate copolymer
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(antigen determination in body fluid with **immunoassay** comprising polymeric nanoparticle-immobilized antibody)

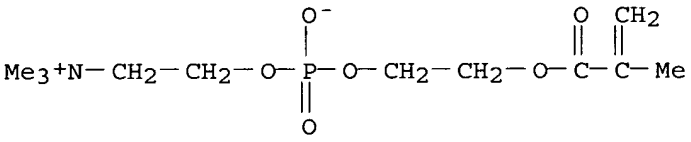
IT **125275-25-4P**, 2-Methacryloyloxyethylphosphorylcholine-butyl methacrylate copolymer
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(antigen determination in body fluid with **immunoassay** comprising polymeric nanoparticle-immobilized antibody)

RN 125275-25-4 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

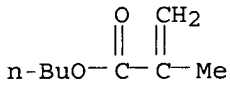
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 97-88-1
CMF C8 H14 O2



L82 ANSWER 10 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:857773 HCAPLUS

DOCUMENT NUMBER: 141:346148
TITLE: Substance immobilization agent, and substance immobilization method/substrate using agent
INVENTOR(S): Yamauchi, Tetsuya; Ito, Yoshihiro; Hasuda, Hirokazu; Konno, Tomohiro; Ishihara, Kazuhiko
PATENT ASSIGNEE(S): Kanagawa Academy of Science and Technology, Japan
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004088319	A1	20041014	WO 2004-JP4510	20040330

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:		
JP 2003-93834	A	20030331
JP 2003-346560	A	20031006

ED Entered STN: 18 Oct 2004

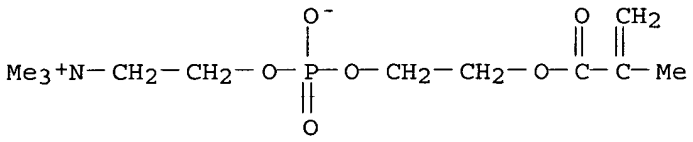
AB A substance immobilization agent is disclosed, which is capable of immobilizing various substances to be immobilized to a substrate by covalent bond, and is highly effective in preventing non-specific adsorption. The agent comprises a polymer having phosphorylcholine groups and multiple photoreactive groups (e.g., azido groups) in a single mol. The polymer binds through the photoreactive groups with a substrate and a substance to be immobilized, whereby the substance to be immobilized is bonded to the substrate through the polymer by a covalent bond. Furthermore, non-specific adsorption is effectively prevented by the phosphorylcholine groups. Also provided is an immobilization agent, which is used for immobilizing a desired substance to a substrate and comprises a nonionic water-soluble polymer having at least two photoreactive groups in a single mol.

IC ICM G01N033-547
ICS G01N033-53; C12M001-40; C12M001-34
CC 9-16 (Biochemical Methods)
IT **Immunoassay**
(chemiluminescence; substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)
IT **Immunoassay**
(fluorescence; substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)
IT 106-91-2, Glycidylmethacrylate 814-68-6, Acrylic acid chloride 6066-82-6, N-Hydroxysuccinimide 6427-66-3, 4-Azidobenzoic acid 14860-64-1, 4-Azidoaniline 18358-13-9, Methacrylate, reactions 25322-68-3, Polyethyleneglycol 38862-24-7 **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine **88539-10-0** **150120-15-3** **158760-93-1** 163674-39-3 163801-79-4

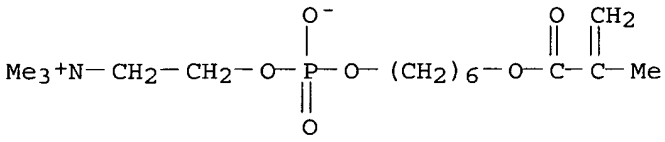
179637-06-0 179953-15-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)

IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
88539-10-0 150120-15-3 158760-93-1
179637-06-0 179953-15-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(substance immobilization agent consisting of polymer with photoreactive groups, and use in substance immobilization method/substrate)

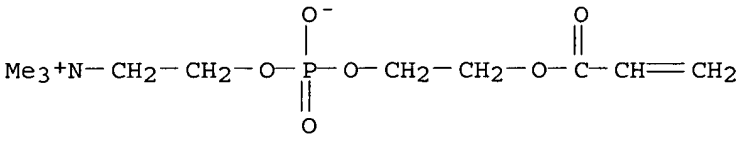
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



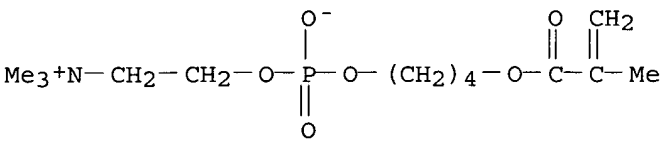
RN 88539-10-0 HCAPLUS
CN 3,5,12-Trioxa-4-phosphapentadec-14-en-1-aminium, 4-hydroxy-N,N,N,14-tetramethyl-13-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



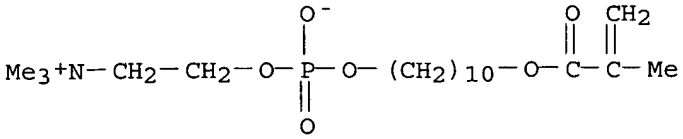
RN 150120-15-3 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



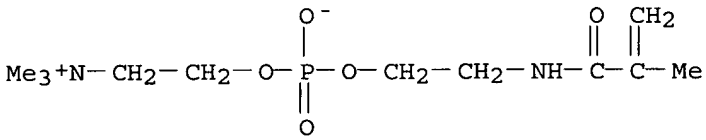
RN 158760-93-1 HCAPLUS
CN 3,5,10-Trioxa-4-phosphatridec-12-en-1-aminium, 4-hydroxy-N,N,N,12-tetramethyl-11-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 179637-06-0 HCAPLUS
CN 3,5,16-Trioxa-4-phosphanonadec-18-en-1-aminium, 4-hydroxy-N,N,N,18-tetramethyl-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 179953-15-2 HCAPLUS
CN 3,5-Dioxa-8-aza-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Ito	2003	24	3021	Biomaterials	
Motorola Inc	2001			EP 1190254 A	HCAPLUS
Motorola Inc	2001			WO 2001001143 A	HCAPLUS
Motorola Inc	2001			JP 2003524150 A	
Motorola Inc	2001			US 6372813 A	HCAPLUS
Surmodics Inc	2002			EP 1141385 A	HCAPLUS
Surmodics Inc	2002			WO 2000040593 A	HCAPLUS
Surmodics Inc	2002			JP 2002534663 A	
Surmodics Inc	2002			US 6465178 A	HCAPLUS
The Kanagawa Academy Of	2004			JP 2004125781 A	HCAPLUS

L82 ANSWER 11 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:1038468 HCAPLUS
DOCUMENT NUMBER: 142:22289
TITLE: Anti-Fc antibodies and fragments or antibody-binding molecules for clinical diagnosis and biotechnological research
INVENTOR(S): Kawamura, Kenji
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004340818	A2	20041202	JP 2003-139139	20030516

PRIORITY APPLN. INFO.: JP 2003-139139 20030516
ED Entered STN: 03 Dec 2004
AB Disclosed is an immunoassay container comprising ≥1

antibody-binding mol. such as protein A, protein G, anti-Fc antibodies or Fab fragments. The antibody-binding mol.-coated container is treated with hydrophilic polymer or grafted hydrophilic polymer. The immunoassay container is useful for ELISA without the requirement of blocking procedure and is especially useful for clin. diagnosis and biotechnol. purpose.

IC ICM G01N033-543

CC 15-1 (Immunochemistry)
Section cross-reference(s): 9

IT Biotechnology
Diagnosis
Human
Immunoassay
(anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT **Immunoassay**
(apparatus; anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT **Immunoassay**
(enzyme-linked immunosorbent assay; anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT 25249-16-5, 2-Polyhydroxyethylmethacrylate **125275-25-4**, 2-Methacryloyloxyethylphosphorylcholine-butylmethacrylate copolymer
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

IT **125275-25-4**, 2-Methacryloyloxyethylphosphorylcholine-butylmethacrylate copolymer
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(anti-Fc antibodies and fragments or antibody-binding mols. for clin. diagnosis and biotechnol. research)

RN 125275-25-4 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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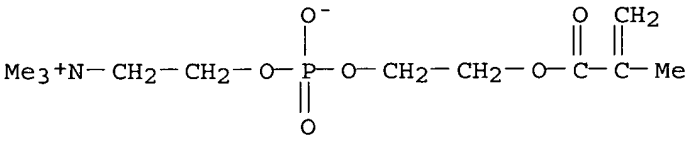
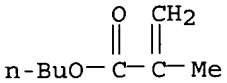
CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

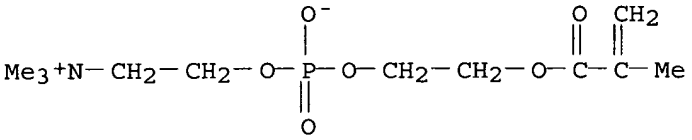
CRN 97-88-1
CMF C8 H14 O2



L82 ANSWER 12 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:348566 HCAPLUS
DOCUMENT NUMBER: 141:153361
TITLE: Evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents
AUTHOR(S): Park, Jong-Won; Kurosawa, Shigeru; Aizawa, Hidenobu; Naganawa, Ryuichi; Yamada, Satoshi; Ishihara, Kazuhiko
CORPORATE SOURCE: National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, 305-8565, Japan
SOURCE: Proceedings of the IEEE International Frequency Control Symposium & PDA Exhibition jointly with the 17th European Frequency and Time Forum, Tampa, FL, United States, May 4-8, 2003 (2003), 978-980. Institute of Electrical and Electronics Engineers: New York, N. Y.
CODEN: 69FHUZ; ISBN: 0-7803-7688-9
DOCUMENT TYPE: Conference
LANGUAGE: English
ED Entered STN: 29 Apr 2004
AB We tested five stabilizers for remaining immunol. activity of anti-dinitrophenol (DNP), anti-C-reactive protein (CRP), and anti-2,3,7,8 tetrachlorodibenzo-p-dioxin (TCDD) antibody immobilized QCM under several storage conditions. Investigated nine stabilizers were as following; 0.25 % BlockAce and StabilGuard as com. available reagents, 0.2 % glycerin and 0.2 % Bovine Serum Albumin (BSA) as conventional stabilizers, 0.2 % MPC copolymer stabilizer as developed reagent, and PBS solution as blank reagent. According to the exptl. results, we found MPC copolymer (NOF Corp., Japan) coated QCM showed highly immunol. activity through specific antigens and their antibodies after the heat acceleration test and long-term storage.
CC 9-10 (Biochemical Methods)
IT **Immunoassay**
Stability
Stabilizing agents
(evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents)
IT 56-81-5, Glycerin, analysis **125275-25-4** 658045-21-7, BlockAce 658051-44-6, StabilGuard
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents)
IT **125275-25-4**
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(evaluation of stabilizing effect for several monoclonal antibody immobilized quartz crystal microbalance by stabilizer reagents)
RN 125275-25-4 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

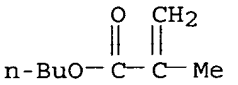
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 97-88-1
CMF C8 H14 O2



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bunde, R	1998	46	1223	Talanta	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Kurosawa, S	2000	47	1256	IEEE Trans Ultrason,	
Luppa, P	2001	314	1	Clin Chim Acta	HCAPLUS
Park, J	2003	50	193	IEEE Trans Ultrason,	
Sakaki, S	1999	47	523	J Biomed Mater Res	HCAPLUS
Sakaki, S	2000	32	637	Polym J	HCAPLUS
Steegborn, C	1997	12	19	Biosens Bioelect	HCAPLUS
Towery, R	2001	16	1	Biosen Bioelect	HCAPLUS

L82 ANSWER 13 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:338278 HCAPLUS
DOCUMENT NUMBER: 141:273834
TITLE: Reproducibility evaluation of immunosensor with antibody-immobilized beads column (II)
AUTHOR(S): Fuchiwaki, Yusuke; Rikitake, Kotaro; Futagami, Norimichi; Yasuzawa, Mikito
CORPORATE SOURCE: Department of Chemical Science and Technology, Faculty of Engineering, The University of Tokushima, Tokushima, 770-8506, Japan
SOURCE: Chemical Sensors (2003), 19(Suppl. B), 64-66
CODEN: KAGSEU
PUBLISHER: Denki Kagakkai Kagaku Sensa Kenkyukai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
ED Entered STN: 26 Apr 2004
AB The reproducibility of the antibody-immobilized beads by the acidic antigen-antibody bonds cleavage treatment was performed using an optical procedure. The fluorescein derivative was conjugated to the antigen in order to determine the affinity of the immobilized antibody. The attempt to reduce the nonspecific adsorption of fluorescein-labeled antigen to immobilized antibody was also performed by adding polyethylene glycol and

poly(2-methacryloyloxyethyl phosphorylcholine) in the reaction solns. Although, both polymers were effective to reduce the nonspecific adsorption, either could eliminate the nonspecific adsorption. Fair reproducibility was observed for approx. first five repetition, while the affinity reduction of the immobilized antibody was inevitable by the acidic treatment of pH 3.

CC 9-10 (Biochemical Methods)
Section cross-reference(s): 2, 15

IT 25322-68-3, Polyethylene glycol **67881-99-6**, Poly(2-methacryloyloxyethyl phosphorylcholine)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(effect on prevention of non-specific adsorption on beads of; reproducibility evaluation of **immunosensor** with antibody-immobilized beads column)

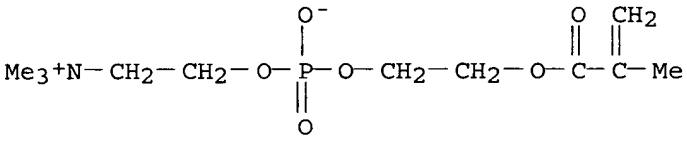
IT **67881-99-6**, Poly(2-methacryloyloxyethyl phosphorylcholine)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(effect on prevention of non-specific adsorption on beads of; reproducibility evaluation of **immunosensor** with antibody-immobilized beads column)

RN 67881-99-6 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



L82 ANSWER 14 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:172237 HCAPLUS
DOCUMENT NUMBER: 136:213193
TITLE: Highly reproducible agglutination immunoassay method and reagent
INVENTOR(S): Shigenobu, Kayoko; Shuto, Kenshiro; Sakaki, Shujiro
PATENT ASSIGNEE(S): Kyowa Medex Co.,ltd, Japan; Nof Corporation
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018953	A1	20020307	WO 2001-JP7385	20010828

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,

US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2420770	AA	20020307	CA 2001-2420770	20010828
AU 2001080210	A5	20020313	AU 2001-80210	20010828
EP 1314982	A1	20030528	EP 2001-958575	20010828
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003166302	A1	20030904	US 2003-363038	20030228
PRIORITY APPLN. INFO.:			JP 2000-259964 A	20000829
			WO 2001-JP7385 W	20010828

ED Entered STN: 08 Mar 2002

AB A highly reproducible agglutination immunoassay method is provided, in which the agglutination of insol. carrier particles (e.g., latex) takes place in a stable and homogeneous way. An immunoassay reagent used for this method is also provided. In this agglutination immunoassay method, an antigenic substance in a test sample is bound to the insol. carrier particles substantially not carrying any bound-antigen or -antibody, and then, an antibody or an antibody complex capable of specifically reacting with the antigenic substance is bound to the particles to selectively give rise to the agglutination. The reagent contains a polymer which is prepared either by homogeneously polymerizing a monomer possessing a phosphorylcholine group and a vinyl group (e.g., 2-methacyroyloxyethylphosphorylcholine), or co-polymerizing the monomer possessing a phosphorylcholine group and a vinyl group, and another monomer possessing a vinyl group (e.g., n-butylmetharylate). An improved reproducibility was obtained when the HbA1c concentration in blood samples were determined with this reagent using anti-HbA1c monoclonal antibody in comparison to the conventional reagents.

IC ICM G01N033-543

CC 9-10 (Biochemical Methods)

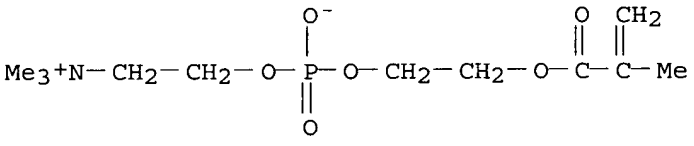
IT **Immunoassay**
(agglutination test; highly reproducible agglutination immunoassay method and reagent)

IT 97-88-1, n-Butylmethacrylate **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(highly reproducible **agglutination immunoassay** method and reagent)

IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(highly reproducible **agglutination immunoassay** method and reagent)

RN 67881-98-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

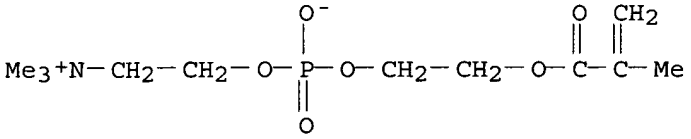
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Hitachi Chemical Co Ltd	1987			JP 62218865 A	HCAPLUS

Nitto Electric Co Ltd	1986		JP 61274261 A	HCAPLUS
Oriental Yeast Co Ltd	1996		JP 08101196 A	HCAPLUS

L82 ANSWER 15 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:692742 HCAPLUS
DOCUMENT NUMBER: 138:316997
TITLE: Water-soluble phospholipid polymers as a novel synthetic blocking reagent in an immunoassay system
AUTHOR(S): Sakaki, Shujiro; Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: Tokyo Medical and Dental University, Tokyo, Japan
SOURCE: Biomedical Diagnostic Science and Technology (2002), 353-366. Editor(s): Law, Wai Tak; Akmal, Naim; Usmani, Arthur M. Marcel Dekker, Inc.: New York, N. Y.
CODEN: 69DBEP; ISBN: 0-8247-0725-7
DOCUMENT TYPE: Conference
LANGUAGE: English
ED Entered STN: 13 Sep 2002
AB Water-soluble amphiphilic PMSt, a random copolymer of 2-methacryloyloxyethyl phosphorylcholine and styrene, was found to be an effective blocking reagent in the ELISA method. Measurements of the nonspecific adsorption and immunol. activities of enzyme-antibody conjugate showed that PMSt has comparable or even better performance than bovine serum albumin and casein as a blocking reagent. No characteristic changes of PMSt were observed from its being frozen and melted repeatedly.
CC 9-10 (Biochemical Methods)
IT **Immunoassay**
(enzyme-linked immunosorbent assay; water-soluble phospholipid polymers as novel synthetic blocking reagent in immunoassay system)
IT **Immunoassay**
(water-soluble phospholipid polymers as novel synthetic blocking reagent in immunoassay system)
IT **134483-35-5**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(water-soluble phospholipid polymers as novel synthetic blocking reagent in **immunoassay** system)
IT **134483-35-5**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(water-soluble phospholipid polymers as novel synthetic blocking reagent in **immunoassay** system)
RN 134483-35-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

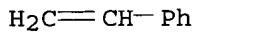
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 100-42-5
CMF C8 H8



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anderton, B	1980	2	122	Immunol Today	
Donovan, J	1975	250	1966	J Biol Chem	HCAPLUS
Farr, A	1981	47	129	J Immunol Method	HCAPLUS
Ghosh, S	1974	337	395	Biochem Biophys Acta	HCAPLUS
Ikemi, M	1982	15	281	Macromolecules	HCAPLUS
Imagawa, M	1982	4	41	J Appl Biochem	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1994	32	859	J Polym Sci A, Polym	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Ishikawa, E	1987	1	238	J Clin Lab Anal	HCAPLUS
Ishikawa, E	1983	4	209	J Immunoassay	HCAPLUS
Isikawa, E	1983	18	219	Develop Immunol	
Orci, L	1985	28	528	Diabetologia	HCAPLUS
Osborn, M	1978	77	R27	J Cell Biol	MEDLINE
Wisdom, G	1976	22	1243	Clin Chem	HCAPLUS

L82 ANSWER 16 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:617197 HCAPLUS
DOCUMENT NUMBER: 135:192510
TITLE: Microparticle dispersion agent for clinical test, reagent for clinical test, its manufacturing method, clinical test method and application
INVENTOR(S): Shudo, Kenshiro; Sakaki, Shujiro; Yamada, Satoru; Sakamoto, Nobuyuki; Suzuki, Tadashi
PATENT ASSIGNEE(S): Nof Corporation, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001228149	A2	20010824	JP 2000-34931	20000214

PRIORITY APPLN. INFO.: JP 2000-34931 20000214
ED Entered STN: 24 Aug 2001
AB A microparticle dispersion agent for a clin. test is provided, which improves a dispersion stability of the microparticle-containing reagent and a redispersion ability of the microparticles for clin. test coagulated during the process of reagent preparation or measurement without decreasing the activity of the bound antigen or antibody. The microparticle dispersion agent possessing high reproducibility and high sensitivity is processed by a simple method suited for an automated analyzer. The agent contains as an effective component a polymer prepared by polymerizing the monomer composition

consisting of phosphorylcholin-analogous group-containing monomer (e.g., 2-(meth)acryloyloxyethyl-2'-(trimethylammonio)ethylphosphate).

IC ICM G01N033-531
ICS G01N033-543

CC 9-10 (Biochemical Methods)

IT **Immunoassay**
(agglutination test; microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

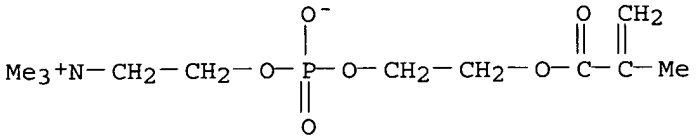
IT **Immunoassay**
(apparatus, automated; microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

IT 97-88-1, n-Butylmethacrylate 18358-13-9, Methacrylate, reactions **67881-98-5 150120-15-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

IT **67881-98-5 150120-15-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(microparticle dispersion agent for clin. test, reagent for clin. test, manufacturing method, clin. test method and application)

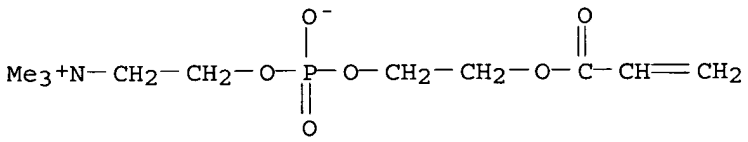
RN 67881-98-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 150120-15-3 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 17 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:759015 HCAPLUS

DOCUMENT NUMBER: 137:68069

TITLE: A comparison of the use of an ATP-based bioluminescent assay and image analysis for the assessment of bacterial adhesion to standard HEMA and biomimetic soft contact lenses

AUTHOR(S): Andrews, C. S.; Denyer, S. P.; Hall, B.; Hanlon, G. W.; Lloyd, A. W.

CORPORATE SOURCE: School of Pharmacy and Biomolecular Sciences, Biomedical Materials Research Group, University of Brighton, Moulsecoomb, Brighton, BN2 4GJ, UK

SOURCE: Biomaterials (2001), 22(24), 3225-3233

CODEN: BIMADU; ISSN: 0142-9612
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 18 Oct 2001

AB The aim of this study was to investigate in vitro adhesion of clin. relevant bacteria to standard HEMA and novel biomimetic soft contact lenses (SCL) using bioluminescent ATP assay and image anal. Unworn SCL were incubated with Pseudomonas aeruginosa, Staphylococcus epidermidis or Serratia marcescens suspended in sterile phosphate buffered saline (PBS). The level of bacterial adhesion after 1, 2, 4, 6 and 18 h, was assessed using both image anal. and a bioluminescent ATP assay. Species differences in the overall level of adhesion to the different types of lens were observed using both measurement techniques. Generally bacterial adhesion was shown to peak at 4-6 h, then decline to a much lower level by 18 h. After 4 h, adhesion of all species of bacteria to the biomimetic SCL (omafilcon A) was found to be significantly lower than to the standard HEMA SCL (polymacon) ($p<0.05$, Student's t-test, n=4). Both these techniques demonstrated that novel biomimetic SCL materials exhibit significantly lower bacterial adhesion in vitro compared to standard HEMA SCL materials. SCL manufactured with these novel biomimetic materials may reduce the risk of infection.

CC 63-7 (Pharmaceuticals)

IT 25053-81-0, Polymacon **144056-32-6**, Omafilcon A
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(comparison of use of ATP-based bioluminescent **assay** and image anal. for assessment of bacterial adhesion to standard HEMA and biomimetic soft contact lenses)

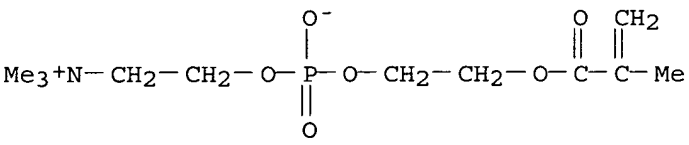
IT **144056-32-6**, Omafilcon A
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(comparison of use of ATP-based bioluminescent **assay** and image anal. for assessment of bacterial adhesion to standard HEMA and biomimetic soft contact lenses)

RN 144056-32-6 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

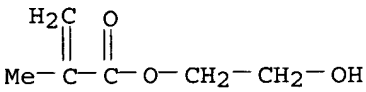
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



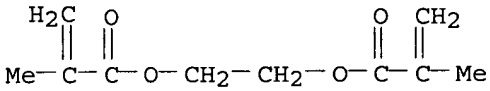
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

CRN 97-90-5
CMF C10 H14 O4



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Cowell, B	1998	84	950	J Appl Microbiol	HCAPLUS
Denyer, S	1989		189	ATP luminescence rap	HCAPLUS
Elder, M	1993	273	509	The practitioner	
Gopinathan, U	1997	82	653	J Appl Microbiol	MEDLINE
Gristina, A	1987	237	1588	Science	HCAPLUS
Hall, B	1989	10	219	Biomaterials	HCAPLUS
Hayward, J	1984	5	135	Biomaterials	HCAPLUS
Holden, B	1996	22	47	CLAO J	MEDLINE
Lan, J	1999	27	218	Aust NZ J Ophthalmol	MEDLINE
Liesegang, T	1997	16	125	Cornea	MEDLINE
Lloyd, A	2000	23	119	Contact Lens Anterio	
Lloyd, A	1997	38	884	Invest Ophthalmol Vi	
Lundin, A	1989		11	ATP luminescence rap	HCAPLUS
Schultz, C	1995	15	243	J Ind Microbiol	HCAPLUS
Schultz, C	2000	24	113	J Ind Microbiol Biot	HCAPLUS
Schultz, C	2000	25	17	J Ind Microbiol Biot	HCAPLUS
Slusher, M	1987	105	110	Arch Ophthalmol	MEDLINE
Stern, G	1990	9	S36	Cornea	
Taylor, R	1998	75	23	Optometry Vision Sci	MEDLINE
Thakur, A	1999	27	224	Aust NZ J Ophthalmol	MEDLINE
Williams, T	1997	25	S30	Aust NZ J Ophthalmol	
Williams, T	1998	75	266	Optometry Vision Sci	MEDLINE

L82 ANSWER 18 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:457297 HCAPLUS
DOCUMENT NUMBER: 133:86476
TITLE: Immunoassay container free from non-specific adsorption
INVENTOR(S): Tanaka, Hayao
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2000039582	A1	20000706	WO 1999-JP5979	19991028
W: AU, CA, CN, JP, KR, NO, NZ, RU, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2356857	AA	20000706	CA 1999-2356857	19991028
AU 9963667	A1	20000731	AU 1999-63667	19991028
EP 1152242	A1	20011107	EP 1999-951118	19991028
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 3681983	B2	20050810	JP 2000-591430	19991028
JP 2005099040	A2	20050414	JP 2004-341443	20041126

PRIORITY APPLN. INFO.:	JP 1998-367404 A	19981224
	JP 1999-56253 A	19990303
	JP 1999-212096 A	19990727
	JP 2000-591430 A3	19991028
	WO 1999-JP5979 W	19991028

ED Entered STN: 07 Jul 2000

AB An immunoassay container is designed so that the saturation adsorption of mols. used in the assay is smaller than 1x10-1 pmol/cm2. It is actually free from non-specific adsorption causative of reagent loss, sensitivity decrease, and precision decrease. The inner surface of the container is formed or coated with highly hydrophilic polymer or highly hydrophobic polymer, preferably coated with highly hydrophilic polymer, or more preferably coated with extremely highly hydrophilic polymer to prevent the adsorption of assay reagent, antigen or antibody. The extremely highly hydrophilic polymer is selected from polyhydroxyalkylmethacrylate, polyoxyalkylene (C2-C4) group-containing methacrylate polymer or copolymer, polyvinylpyrrolidone, phospholipid-polymer complex, or 2-methacryloyloxyethylphosphorylcholine polymer or copolymer.

IC ICM G01N033-53

CC 9-10 (Biochemical Methods)
Section cross-reference(s): 15

IT **Immunoassay**
(enzyme-linked immunosorbent assay; immunoassay container free from non-specific adsorption)

IT Blood serum
Containers
Hydroxyl group
Immunoassay
(immunoassay container free from non-specific adsorption)

IT 79-41-4D, Methacrylic acid, polyoxyalkylene (C2-C4) group-containing polymer, and copolymer 97-88-1D, Butyl methacrylate, copolymer with 2-methacryloyloxyethyl phosphorylcholine 9002-84-0, Polytetrafluoroethylene 25087-26-7D, Polymethacrylic acid, hydroxyalkyl derivs. 25249-16-5 **67881-98-5D**, 2-Methacryloyloxyethyl phosphorylcholine, polymer and copolymer with butylmethacrylate
RL: NUU (Other use, unclassified); USES (Uses)
(**immunoassay** container free from non-specific adsorption)

IT **67881-98-5D**, 2-Methacryloyloxyethyl phosphorylcholine, polymer and copolymer with butylmethacrylate
RL: NUU (Other use, unclassified); USES (Uses)
(**immunoassay** container free from non-specific adsorption)

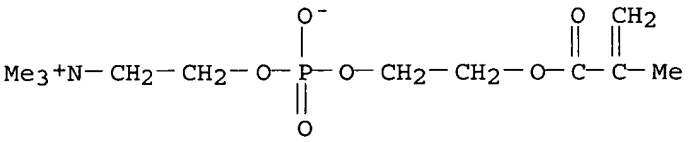
RN 67881-98-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymeric solid support-immobilized antigen or antibody and its use)

IT **67881-98-5DP**, polymers and copolymers **67882-00-2P 125275-25-4P 134483-35-5P 148569-41-9P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymeric solid support-immobilized antigen or antibody and its use)

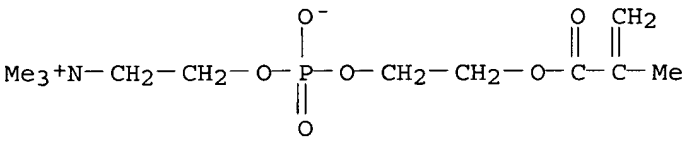
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 67882-00-2 HCAPLUS
CN Ethanaminium, 2-[[hydroxy[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]phosphinyl]oxy]-N,N,N-trimethyl-, inner salt, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

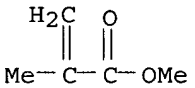
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

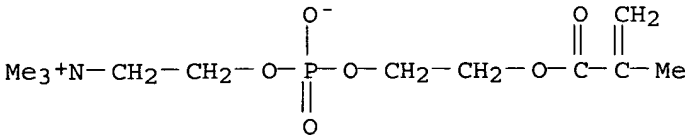
CRN 80-62-6
CMF C5 H8 O2



RN 125275-25-4 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

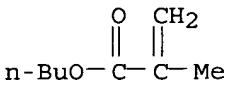
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

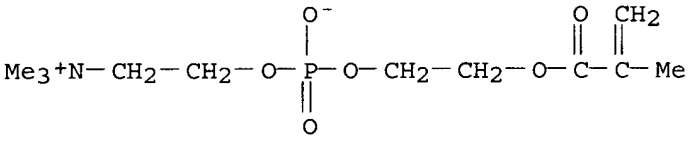
CRN 97-88-1
CMF C8 H14 O2



RN 134483-35-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

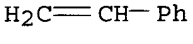
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

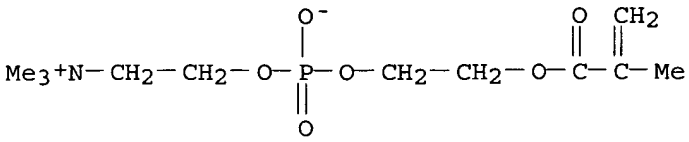
CRN 100-42-5
CMF C8 H8



RN 148569-41-9 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

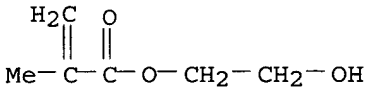
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 868-77-9
CMF C6 H10 O3



L82 ANSWER 22 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:112708 HCAPLUS
DOCUMENT NUMBER: 128:215281
TITLE: Stabilization of proteins with phosphorylcholine group-containing polymers and stabilized compositions
INVENTOR(S): Sakaki, Shujiro; Sudo, Kenshiro; Yamada, Akira; Ando, Ryota; Matsuyama, Kazuo; Koinuma, Yasuhiro; Nakabayashi, Norio; Ishihara, Kazuhiko
PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan; Nakabayashi, Norio; Ishihara, Kazuhiko; Research Development Corp. of Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

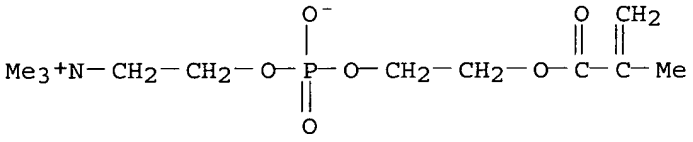
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10045794	A2	19980217	JP 1996-202367	19960731

PRIORITY APPLN. INFO.: JP 1996-202367 19960731
ED Entered STN: 25 Feb 1998
AB Proteins, e.g. albumins, blood coagulation factors, Igs, enzymes for cleaning contact lenses, etc., are stabilized in the presence of phosphorylcholine group-containing polymers. Also claimed are stabilized compns. containing (A) polymers prepared from monomers containing CH2:CXCO2CH2CH2OP(O)(O-)OCH2CH2N+Me3 (X = H, Me) 1.0 + 10-4-80, (B) proteins for plasma prepns. or labeled immunoreactive substances 1.0 + 10-14-20, and (C) buffer solns. 0-99.9 weight%. A solution of 5.0 + 10-4 weight% human IgG and 2.0 weight% poly(2-methacryloyloxyethylphosphorylcholine) (preparation given) in a Na2HPO4/NaH2PO4 buffer was incubated at 40° for 4 wk to show reactivity with anti-human IgG1 antibody-immobilized plate 104.8%, vs. 5.5% for a control solution containing BSA instead of the polymer.
IC ICM C07K001-00
ICS C07K014-00; C07K016-00; C08L089-00; C08L101-00; C12N009-96; C12Q001-25; A61K038-00; A61K038-16; A61K038-43; C08F030-02; C08L043-02

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 7, 15, 38, 63
IT **67881-99-6P 125275-25-4P 134483-35-5P**
RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); PNU (Preparation, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(stabilization of proteins such as albumins and **Igs** and enzymes and their labeled products with phosphorylcholine group-containing polymers)
IT **67881-99-6P 125275-25-4P 134483-35-5P**
RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); PNU (Preparation, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(stabilization of proteins such as albumins and **Igs** and enzymes and their labeled products with phosphorylcholine group-containing polymers)
RN 67881-99-6 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

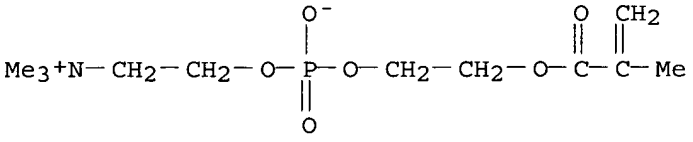
CRN 67881-98-5
CMF C11 H22 N O6 P



RN 125275-25-4 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

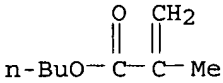
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

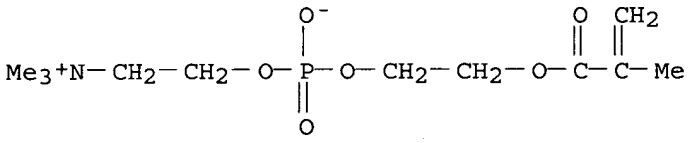
CRN 97-88-1
CMF C8 H14 O2



RN 134483-35-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

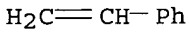
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 100-42-5
CMF C8 H8



L82 ANSWER 23 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:606836 HCAPLUS
DOCUMENT NUMBER: 123:5146
TITLE: Protein adsorption-preventing polymers or copolymers
INVENTOR(S): Sakaki, Hidejiro; Nakada, Shinji; Matsumoto, Takeo; Koinuma, Yasuyoshi; Nakabayashi, Norio; Ishihara, Kazuhiko
PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07083923	A2	19950331	JP 1993-228973	19930914
JP 3443891	B2	20030908		

PRIORITY APPLN. INFO.: JP 1993-228973 19930914
ED Entered STN: 14 Jun 1995
AB 2-Methacryloyloxyethyl phosphorylcholin polymer and copolymer containing 2-methacryloyloxyethyl phosphorylcholine are used for preventing protein adsorption. The (co)polymers are useful for increasing the reproductivity and accuracy of two-site method, e.g. antigen or antibody sandwich

immunoassay, for biochem. or clin. diagnosis. In example, poly-2-methacryloyloxyethyl phosphorylcholine, and 2-methacryloyloxyethyl phosphorylcholine copolymd. with Bu methacrylate, Me methacrylate, 2-hydroxyethyl methacrylate, or styrene were prepared The prepared polymer or copolymers were used for preventing adsorption of FITC-labeled mouse anti-human carcinoembryonic antigen IgG during immunoassay.

IC ICM G01N033-531
ICS G01N033-543

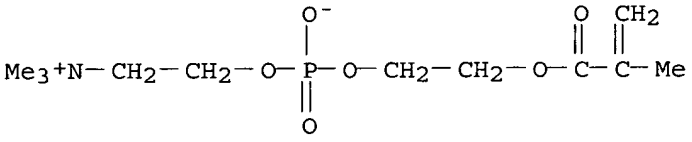
CC 9-15 (Biochemical Methods)

IT **Immunoassay**
(methacryloyloxyethyl phosphorylcholine polymer or copolymer for preventing protein adsorption in two-site anal. method or immunoassay)

IT **67881-98-5DP**, 2-Methacryloyloxyethyl phosphorylcholine, polymers or copolymers **67881-99-6P 67882-00-2P 125275-25-4P 134483-35-5P 148569-41-9P**
RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(methacryloyloxyethyl phosphorylcholine polymer or copolymer for preventing protein adsorption in two-site anal. method or **immunoassay**)

IT **67881-98-5DP**, 2-Methacryloyloxyethyl phosphorylcholine, polymers or copolymers **67881-99-6P 67882-00-2P 125275-25-4P 134483-35-5P 148569-41-9P**
RL: ARU (Analytical role, unclassified); MOA (Modifier or additive use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(methacryloyloxyethyl phosphorylcholine polymer or copolymer for preventing protein adsorption in two-site anal. method or **immunoassay**)

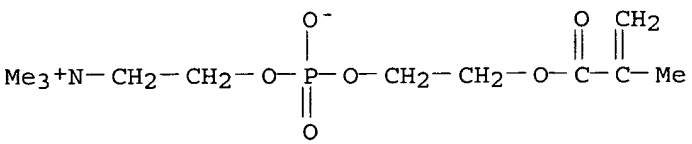
RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 67881-99-6 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

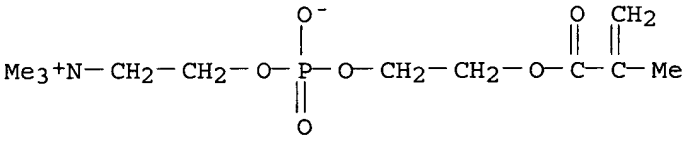
CRN 67881-98-5
CMF C11 H22 N O6 P



RN 67882-00-2 HCAPLUS
CN Ethanaminium, 2-[[hydroxy[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]phosphinyl]oxy]-N,N,N-trimethyl-, inner salt, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

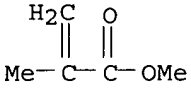
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

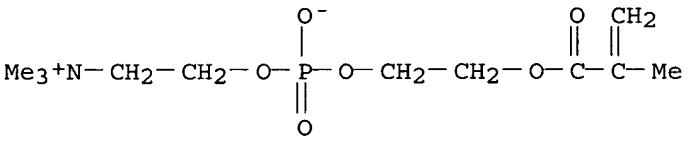
CRN 80-62-6
CMF C5 H8 O2



RN 125275-25-4 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

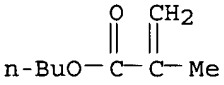
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

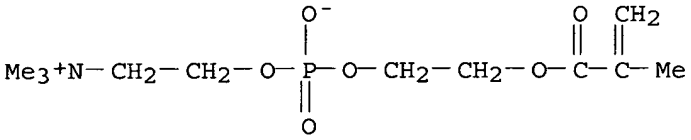
CRN 97-88-1
CMF C8 H14 O2



RN 134483-35-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

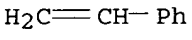
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

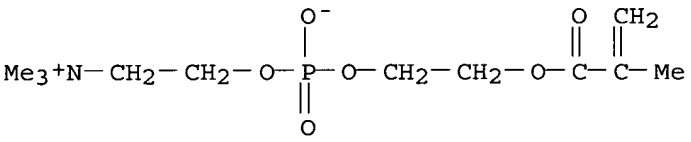
CRN 100-42-5
CMF C8 H8



RN 148569-41-9 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

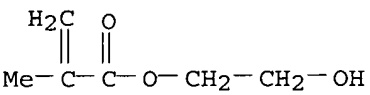
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 868-77-9
CMF C6 H10 O3



=> d ibib ab hitstr 24-26
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 24 OF 70 USPATFULL on STN
ACCESSION NUMBER: 2004:203385 USPATFULL
TITLE: Agglutination accelerator for immunological measurement
INVENTOR(S): Sumida, Kyoichi, Amagasaki-shi, JAPAN
Wada, Koji, Amagasaki-shi, JAPAN
Ishihara, Kazuhiko, Bunkyo-ku, JAPAN
PATENT ASSIGNEE(S): WAKO PURE CHEMICALS INDUSTRIES, LTD., Chuo-ku, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004157276	A1	20040812	
APPLICATION INFO.:	US 2004-626502	A1	20040304	(10)

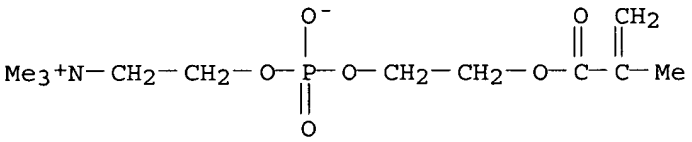
	NUMBER	DATE
PRIORITY INFORMATION:	JP 2001-169051	20010605

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Page(s)
LINE COUNT: 1035
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An object of the present invention is to provide an immunoassay of PSA using an agglutination accelerator, which has an agglutination accelerating effect equal to or stronger than the known agglutination accelerator; hardly generates non-specific turbidity; and hardly generates salting out even in a solution with a high salt concentration. The present invention relates to an immunoassay of a prostate-specific antigen comprising performing an antigen-antibody reaction in the presence of a polymer having a monomer unit derived from a monomer represented by the following general formula [2]: ##STR1##

(wherein R.sup.1-R.sup.3 are each independently a hydrogen atom or an alkyl group optionally having a hydroxyl group; R.sup.4 is an alkylene group; R.sup.5 is an alkylene group optionally having a substituent and optionally having an oxygen atom in a chain; R.sup.6 is a hydrogen atom or a methyl group, and X is an oxygen atom or a --NH-- group), and a kit of reagent for an immunoassay comprising a reagent containing an agglutination accelerator for the immunoassay.
IT **67881-99-6P**, Poly-2-methacryloyloxyethylphosphorylcholine **125275-25-4P**, n-Butyl methacrylate-2-Methacryloyloxyethylphosphorylcholine copolymer **144514-08-9P**, Stearyl methacrylate-2-Methacryloyloxyethylphosphorylcholinecopolymer **313216-64-7P 478015-82-6P**
(agglutination-promoting agent for antigen or antibody immunoassay)
RN 67881-99-6 USPATFULL
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

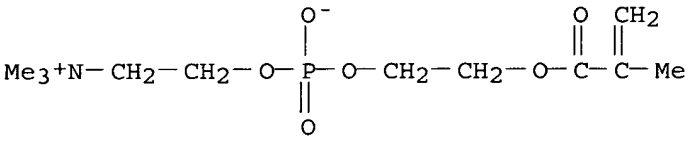
CRN 67881-98-5
CMF C11 H22 N O6 P



RN 125275-25-4 USPATFULL
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

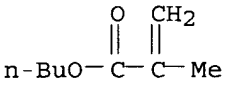
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

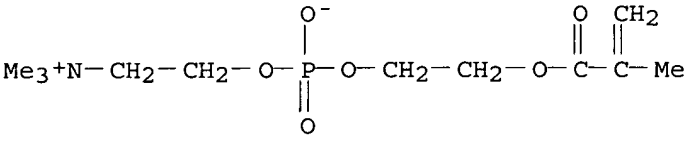
CRN 97-88-1
CMF C8 H14 O2



RN 144514-08-9 USPATFULL
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with octadecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 32360-05-7
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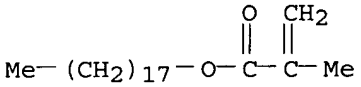
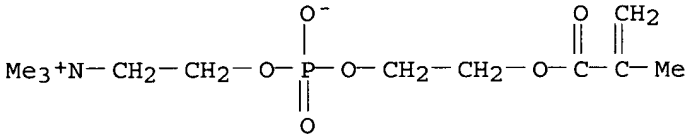


RN 313216-64-7 USPATFULL
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with phenylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

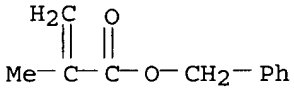
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

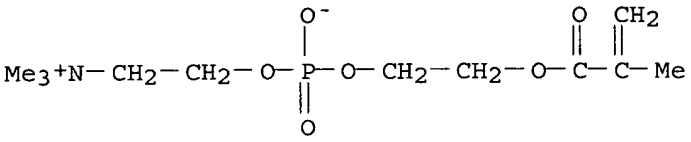
CRN 2495-37-6
CMF C11 H12 O2



RN 478015-82-6 USPATFULL
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-hydroxy-N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)oxy]-1-propanaminium chloride (9CI) (CA INDEX NAME)

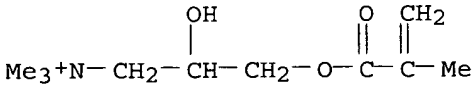
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



CM 2

CRN 13052-11-4
CMF C10 H20 N O3 . Cl



● Cl⁻

L82 ANSWER 25 OF 70 USPATFULL on STN
ACCESSION NUMBER: 2003:238145 USPATFULL
TITLE: Highly reproducible agglutination immunoassay method and reagents
INVENTOR(S): Shigenobu, Kayoko, Sunto-gun, JAPAN
Shuto, Kenshiro, Tsukuba-shi, JAPAN
Sakaki, Shujiro, Tsukuba-shi, JAPAN

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003166302	A1	20030904	
APPLICATION INFO.:	US 2003-363038	A1	20030228	(10)
	WO 2001-JP7385		20010828	

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-259964	20000829

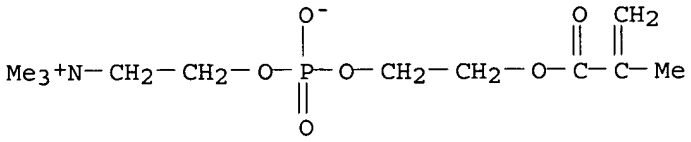
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP, P.O. BOX 34385, WASHINGTON, DC, 20043-9998
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 1030
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides an agglutination immunoassay, wherein the agglutination of insoluble carrier particles such as latex are stabilized and uniformized to give good reproducibility, and a reagent therefor. In the agglutination immunoassay which comprises allowing an antigenic substance in a sample to bind to insoluble carrier particles carrying substantially neither antigens nor antibodies thereon, and allowing an antibody or an antibody complex which reacts specifically to the antigenic substance to bind to the antigenic substance to give a selective agglutination of the insoluble carrier particles, a

homopolymer prepared by polymerization of a monomer such as 2-methacryloyloxyethyl phosphorylcholine having a phosphorylcholine group and a vinyl group, or a copolymer prepared by polymerization of a monomer having a phosphorylcholine group and a vinyl group, with a monomer having a vinyl group such as n-butyl methacrylate is used.

IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
(highly reproducible agglutination immunoassay method and reagent)

RN 67881-98-5 USPATFULL

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 26 OF 70 USPATFULL on STN

ACCESSION NUMBER: 2001:170879 USPATFULL

TITLE: Measuring method and measuring reagent of C-reactive protein

INVENTOR(S): Yokohama, Hiroaki, Tokyo, Japan
Umehara, Harumi, Shizuoka, Japan
Matsumori, Shigeru, Shizuoka, Japan
Yamada, Satoshi, Ibaraki, Japan
Shuto, Kenshiro, Ibaraki, Japan
Sakaki, Shujiro, Ibaraki, Japan
Suzuki, Ken, Ibaraki, Japan

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2001026927	A1	20011004	
APPLICATION INFO.:	US 2001-794323	A1	20010228	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-54096	20000229
	JP 2000-54102	20000229

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: VENABLE, P.O. Box 34385, Washington, DC, 20043-9998
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 1407
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An object of the present invention is to provide a method and a reagent for measuring the subject substances containing high concentration of C-reactive protein without dilution while avoiding prozone phenomenon.

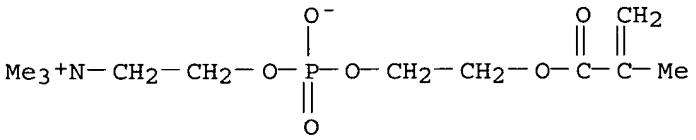
C-reactive protein is measured with a compound having a phosphrylcholine group and a cationic group shown by the general formula (I) [in the formula (I), where R.sup.1, R.sup.2 and R.sup.3 stand for a hydrogen atom, substituted or non-substituted alkyl, or substituted or non-substituted alkenyl, and X.sup.- stands for an inorganic anion or an organic anion) and an antibody to C-reactive protein. Or, C-reactive protein is measured with a surface active agent having a

phosphorylcholine group, a surface active agent having a cationic group shown by the formula (II) [Y.sub.1 stands for a hydrophobic group, and R.sub.1, R.sub.2 and R.sub.3 stand for a hydrogen atom, substituted or non-substituted alkyl, or substituted or non-substituted alkenyl], and an antibody to C-reactive protein. As an antibody to C-reactive protein, an antibody carried by a water-insoluble carrier such as latex made from polystyrene is preferable. ##STR1##

IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
(antibody and surface active agent having phosphorylcholine group and surface active agent having cationic group for measuring C-reactive protein)

RN 67881-98-5 USPATFULL

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



=> d iall abeq tech abex 27
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 27 OF 70 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-175043 [17] WPIX
DOC. NO. CPI: C2003-045673
TITLE: Non-specific hybridization inhibitors based on polymer containing carboxyl, sulfone and phosphorylcholine groups, applicable in e.g. gene analysis and disease diagnosis in clinical examination.
DERWENT CLASS: A89 B04 D16
INVENTOR(S): ASHIHARA, Y; ISOMURA, M; SAKAKI, S; SHUTO, K; TSUCHIDA, M
PATENT ASSIGNEE(S): (NIOF) NOF CORP; (NIOF) NIPPON OILS & FATS CO LTD; (ASHI-I) ASHIHARA Y; (ISOM-I) ISOMURA M; (SAKA-I) SAKAKI S; (SHUT-I) SHUTO K; (TSUC-I) TSUCHIDA M
COUNTRY COUNT: 23
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002088389	A1	20021107	(200317)*	JA	26	C12Q001-68
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR						
W: CN US						
JP 2003014767	A	20030115	(200317)		11	G01N033-566
EP 1391519	A1	20040225	(200415)	EN		C12Q001-68
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR						
US 2004219546	A1	20041104	(200473)			C12Q001-68
CN 1547615	A	20041117	(200516)			C12Q001-68

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 2002088389	A1	WO 2002-JP4128	20020425
JP 2003014767	A	JP 2002-123774	20020425
EP 1391519	A1	EP 2002-722775	20020425
		WO 2002-JP4128	20020425
US 2004219546	A1	WO 2002-JP4128	20020425
		US 2004-476069	20040211
CN 1547615	A	CN 2002-812948	20020425

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1391519	A1 Based on	WO 2002088389

PRIORITY APPLN. INFO: JP 2001-128699 20010426
INT. PATENT CLASSIF.:
MAIN: C12Q001-68; G01N033-566
SECONDARY: C08F230-02; **G01N033-53**
ADDITIONAL: **C08F030-02**
INDEX: **C08F030:02**

BASIC ABSTRACT:

WO 200288389 A UPAB: 20030312

NOVELTY - A non-specific inhibitor containing a polymer (H) having at least 1 carboxyl or sulfone group and a phosphorylcholine-like group in its molecule, which has a weight-average molecular weight of 1000-5000 and exhibits an effect of inhibiting non-specific hybridization, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) reagents for chemical examination containing the inhibitors and examination reagents; and

(2) clinical examination by contacting a specimen with an examination reagent hybridizable with a definite nucleic acid-relating substance in the presence of the inhibitor, and detection of the reaction product.

USE - The inhibitors are applicable in e.g. gene analysis and disease diagnosis in clinical examination.

ADVANTAGE - With the inhibitors for clinical examination, non-specific hybridization can be inhibited and a nucleic acids-relating substance to be assayed can be easily and highly accurately detected.

Dwg.0/0

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: A04-A; A12-L04; A12-V03C2; B04-C03; B04-E01; B11-C08F2; B12-K04A; B12-K04F; D05-H09; D05-H12D1

TECH UPTX: 20030312

TECHNOLOGY FOCUS - POLYMERS - Preferred Inhibitors: The phosphorylcholine-like group is a component of a phosphorylcholine-like group-containing monomer of formula (I).

X = a divalent group;
Y = 1-6C alkyleneoxy group;
Z1 = H or R5O(C=O);
R1 = H or methyl;
R2, R3, R4 = independently H, 1-6C alkyl or hydroxyalkyl;
m = 0 or 1;
n = 1-4; and
R5 = 1-10C alkyl or 1-10C hydroxalkyl.

The polymer (H) is particularly made by polymerizing 5-95 mol.% a phosphorylcholine-like group-containing monomer, carboxyl group-containing monomer or/and sulfone group-containing monomer, and optionally 5-60 mol.% a hydrophobic monomer. The hydrophobic monomer is of formula (II)

R6 = H or methyl;
L1 = -C6H4-, -C610-, -(C=O)O-, -O-, -(C=O)NH, -O(C=O)- or -O(C=O)O-;
L2 = H, -(CH2)g-L3 or ((CH2)p-O)h-L3;
g, h = 1-24;
p = 3-5; and
L3 = H, methyl, -C6H5- or -OC6H5.

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Examination Method: The amount of inhibitor applied in the hybridization system is equivalent to the presence of 0.0001-20 %, by weight polymer (H) in the inhibitor.

ABEX UPTX: 20030312
EXAMPLE - 2-(Methacryloyloxy)ethylphosphorylcholine (MPC; 19.4 g) and methacrylic acid (0.6 g) in water (40 g) were polymerized with succinic peroxide (1.6 g) at 60 degrees C for 8 hours, under nitrogen, to give a polymer powder (14.6 g; weight-average molecular weight = 153000) after precipitation from acetone; characterization by GPC and nuclear magnetic resonance (NMR). The polymer was tested as hybridization inhibitor, e.g. at 3.2 %, by weight, in the detection of a nucleic acid after hybridization.

=> d ibib ed ab hitind 28
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L82 ANSWER 28 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2004:220235 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA14117282686G
TITLE: Biological evaluation and drug delivery application of cationically modified phospholipid polymers
AUTHOR(S): Palmer, Rosemary R.; Lewis, Andrew L.; Kirkwood, Laura C.; Rose, Susanna F.; Lloyd, Andrew W.; Vick, Terry A.; Stratford, Peter W.
CORPORATE SOURCE: Drug Delivery, Biocompatibles UK Ltd., Surrey, GU9 8QL, UK.
SOURCE: Biomaterials, (2004) Vol. 25, No. 19, pp. 4785-4796. CODEN: BIMADU. ISSN: 0142-9612.
COUNTRY: UNITED KINGDOM
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2004:357432
LANGUAGE: English
ENTRY DATE: Entered STN: 20041005
Last Updated on STN: 20041229
ED Entered STN: 20041005
Last Updated on STN: 20041229
AB Phospholipid-like polymers based on 2-methacryloyloxyethyl phosphorylcholine containing varying amts. of the cationically charged monomer choline methacrylate (CMA) from 0 to 30% have been prepared Substrates coated with these materials were shown to bind significantly lower amts. of specific proteins compared to the uncoated control. **ELISA assays** demonstrated that fibrinogen did not bind appreciably to coatings containing 0-30% CMA, whereas albumin binding was seen to increase significantly as the CMA content of the coating increased. Platelet activation **assays**, measurement of plasma **coagulation** time and whole blood contact scanning electron microg. demonstrated that

the haemocompatibility of the coatings was shown to be unaffected by the CMA component. The CMA polymer coatings have been shown to absorb/adsorb many different drug compds. covering a wide range of mol. wts. and release these in a controlled fashion. The range of cationic polymers assessed can interact with the net neg. charge found in many large therapeutic biomols., such as DNA fragments used in gene therapy, that may be of interest in the preventative treatment of conditions such as restenosis. Coronary stents coated with 6% or 20% CMA-containing polymers have been shown to load and release this type of genetic material irresp. of mol. weight of the biomol. Ex vivo and in vivo studies have shown that these compds. can be delivered to the stented section of the vessel with very low quantities delivered outside the vessel target area.

CC 63-7

ST Miscellaneous Descriptors
phospholipid choline methacrylate coating protein adsorption stent drug delivery

RN **208035-88-5**

=> d hitstr 28
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

'HITSTR' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):end

=> d ibib ed ab hitind 29-
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, WPIX, TOXCENTER, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 42 ANSWERS - CONTINUE? Y/(N):y

L82 ANSWER 29 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2004:228146 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA14219360387X
TITLE: Copolymers of 2-methacryloyloxyethyl phosphorylcholine (MPC) as biomaterials
AUTHOR(S): Haris, Parvez I.; Nakabayashi, N.; Iwasaki, Y.
CORPORATE SOURCE: Inst. Biomater. Bioeng., Tokyo Med. Dent. Univ., Kanda, Tokyo, 101-0062, Japan.
SOURCE: Bio-Medical Materials and Engineering, (2004) Vol. 14, No. 4, pp. 345-354.
CODEN: BMENEO. ISSN: 0959-2989.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2004:810369
LANGUAGE: English
ENTRY DATE: Entered STN: 20041014
Last Updated on STN: 20050503

ED Entered STN: 20041014
Last Updated on STN: 20050503

AB A review and discussion. Copolymers of 2-methacryloyloxyethyl

phosphorylcholine (MPC) showed good hemocompatibility as hypothesized. The hypothesis was surfaces having phosphorylcholine groups by polymerization of MPC could accumulate phospholipids from blood stream and show good blood compatibility. The authors designed and prepared a methacrylate having a phosphorylcholine group. While it was possible to introduce them by polymer reactions, polymer reaction is not always good method to prepare the desired pure surface. This must be very important point to consider for biomaterials. The hypothesis was confirmed by changing copolymer composition The adsorption amount of phospholipids on the surfaces increased with increasing the MPC units in the copolymers. On the other hand, increasing MPC units in MPC copolymers decreased adsorption amount of peptides. There is limitation in blood compatibility tests in vitro due to unstable characteristics of blood itself. The authors evaluated them with series of blood compatibility tests, in vitro, ex vivo and in vivo, on coated PMMA beads, modified hollow fibers for hemodialysis and 2 mm small diameter blood vessels, resp. These data suggested MPC is a promising methacrylate to develop good blood contacting devises, which may not require systemic **anticoagulation.** Conventional blood compatible biomaterials were not suitable to make permeable membranes. But MPC is soluble in water and we could prepare permeable membranes to various solutes by the copolymn. Introduction of MPC copolymers on cellulose and polysulfone hollow fiber membranes gave them nonthrombogenicity but it did not give adverse effect on their permeability. These data suggested that it is possible to apply them to hemodialyzers, oxygenators and percutaneous glucose sensors to keep diabetic patients easier. MPC surfaces are good hydrogel to minimize damage on tissues by lubricating between organs and the coated devices. They do not induce denaturation of peptides, which is beneficial to keep activities of enzymes longer. And poly-MPC dissolved is applicable to stabilize several bioactive peptides in aqueous phase. So MPC polymers are useful to minimize fouling by inhibiting the adsorption of bioactive proteins. MPC has high potential to develop many varieties of new biomaterials useful in so-called biotechnol. MPC and their copolymers are com. available from NOF (Tokyo, Japan) and Biocompatibles (UK, as PC technol.).

CC 63-0

ST Miscellaneous Descriptors
review methacryloyloxyethyl phosphorylcholine copolymer biomaterial

RN **67881-98-5** (2-Methacryloyloxyethyl phosphorylcholine)

L82 ANSWER 30 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 7

ACCESSION NUMBER: 2003:125101 TOXCENTER

DOCUMENT NUMBER: PubMed ID: 12580778

TITLE: In vivo evaluation of a MPC polymer coated continuous flow left ventricular assist system

AUTHOR(S): Kihara Shin'ichiro; Yamazaki Kenji; Litwak Kenneth N; Litwak Philip; Kameneva Marina V; Ushiyama Hiroyuki; Tokuno Toshimasa; Borzelleca David C; Umezu Mitsuo; Tomioka Jun; Tagusari Osamu; Akimoto Takehide; Koyanagi Hitoshi; Kurosawa Hiromi; Kormos Robert L; Griffith Bartley P

CORPORATE SOURCE: Department of Surgery, McGowan Institute for Regenerative Medicine, University of Pittsburgh, 300 Technology Drive, Pittsburgh, PA 15219, U.S.A. kiharas@msx.upmc.edu

SOURCE: Artificial organs, (2003 Feb) 27 (2) 188-92. Journal Code: 7802778. ISSN: 0160-564X.

COUNTRY: United States

DOCUMENT TYPE: (EVALUATION STUDIES) Journal; Article; (JOURNAL ARTICLE)

FILE SEGMENT: MEDLINE

OTHER SOURCE: MEDLINE 2003106561
LANGUAGE: English
ENTRY DATE: Entered STN: 20030527
Last Updated on STN: 20030527
ED Entered STN: 20030527
Last Updated on STN: 20030527
AB The aim of this study was the evaluation of the thrombogenicity and the biocompatibility of the SunMedical EVAHEART left ventricular assist system (LVAS) coated with 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer compared to a diamond-like carbon (DLC) coating. Four calves were implanted with the MPC polymer-coated LVAS. Eight calves were implanted with DLC coated LVAS. The thrombogenicity and biocompatibility of the pumps were evaluated. At explant, 60.0 +/- 37.2% (5-85%) of the pump surface area was still coated with MPC polymer after the duration of 45.0 +/- 32.0 days. In 1 out of 4 MPC and 2 out of 8 DLC coated pumps, there was a very small amount of thrombus around the seal ring; otherwise the blood contacting surfaces were free of thrombus. Major organs were normal except for a few lesions in kidneys from both groups. The MPC polymer coated EVAHEART LVAS seems to have low thrombogenicity and high biocompatibility similar to the DLC coated system. The current study demonstrated that the MPC polymer coating shows great promise for being used as an antithrombogenic substrate for the LVAS due to its ease of application, significant cost benefit, and reduction in **anticoagulation** therapy in acute postoperative period.
CT Animals
Blood Physiology
Carbon
Cattle
*Coated Materials, Biocompatible
Coated Materials, Biocompatible: AE, adverse effects
*Heart-Assist Devices
Heart-Assist Devices: AE, adverse effects
*Methacrylates
Methacrylates: AE, adverse effects
*Phosphorylcholine
Phosphorylcholine: AE, adverse effects
*Phosphorylcholine: AA, analogs & derivatives
Research Support, Non-U.S. Gov't
Thrombosis: ET, etiology
RN 107-73-3 (Phosphorylcholine)
67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)
7440-44-0 (Carbon)
CN 0 (Coated Materials, Biocompatible); 0 (Methacrylates)

L82 ANSWER 31 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 9
ACCESSION NUMBER: 2002:147879 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13713181798G
TITLE: Improving the blood compatibility of ion-selective electrodes by employing poly(mpc-co-bma), a copolymer containing phosphorylcholine, as a membrane coating
AUTHOR(S): Berrocal, Maria J.; Johnson, R. Daniel; Badr, Ibrahim H. A.; Liu, Mingdong; Gao, Dayong; Bachas, Leonidas G.
CORPORATE SOURCE: Department of Chemistry and Center of Membrane Sciences, University of Kentucky, Lexington, KY, 40506-0055, USA.
SOURCE: Analytical Chemistry, (2002) Vol. 74, No. 15, pp. 3644-3648.
CODEN: ANCHAM. ISSN: 0003-2700.
COUNTRY: UNITED STATES
DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2002:473221
LANGUAGE: English
ENTRY DATE: Entered STN: 20020702
Last Updated on STN: 20020924
ED Entered STN: 20020702
Last Updated on STN: 20020924
AB The hydrogel poly(2-methacryloyloxyethylphosphorylcholine-co-Bu methacrylate), or poly(MPC-co-BMA), was used as a coating for polyurethane- and poly(vinyl chloride)-based membranes to develop ion-selective electrodes (ISEs) with enhanced blood compatibility. Adverse interactions of poly(MPC-co-BMA) with blood were diminished due to the phosphorylcholine functionalities of the hydrogel, which mimic the phospholipid polar groups present on the surface of many cell membranes. As demonstrated by **immunostaining**, hydrogel-coated PVC membranes soaked in platelet-rich plasma showed less adhesion and activation of platelets than uncoated PVC membranes, indicating an improvement in biocompatibility owing to the hydrogel. Furthermore, little differences in the potentiometric response characteristics, e.g., slope, detection limit, and selectivity, of ISEs employing uncoated and coated membranes were observed
CC 9-7
ST Miscellaneous Descriptors
blood compatibility ion selective electrode
RN 7439-93-2 (Lithium)
7439-95-4 (Magnesium)
7440-09-7 (Potassium)
7440-23-5 (Sodium)
7440-70-2 (Calcium)
14798-03-9 (Ammonium)
107-73-3 (Phosphoryl choline)
9002-86-2 (Polyvinyl chloride)
RN **125275-25-4**

L82 ANSWER 32 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 11
ACCESSION NUMBER: 2003:84457 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13818276154D
TITLE: Importance of a biofouling-resistant phospholipid polymer to create a heparinized blood-compatible surface
AUTHOR(S): Iwasaki, Yasuhiko; Shibata, Naoya; Ninomiya, Madoka; Kurita, Kimio; Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan.
SOURCE: Journal of Biomaterials Science, Polymer Edition, (2002) Vol. 13, No. 3, pp. 323-335.
CODEN: JBSEEA. ISSN: 0920-5063.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2002:522306
LANGUAGE: English
ENTRY DATE: Entered STN: 20030415
Last Updated on STN: 20030429
ED Entered STN: 20030415
Last Updated on STN: 20030429
AB Heparinization is believed to be one of the methods to suppress thrombus formation on blood-contacting surfaces. However, this study hypothesizes that heparinization alone might not be sufficient to provide a blood-compatible surface; i.e., a surface property that resists biofouling

is necessary to obtain an effective heparin-modified surface. 2-Methacryloyloxyethyl phosphorylcholine (MPC) polymers with 2-aminoethyl methacrylate (AEMA) were synthesized to immobilize heparin through ionic bonding. The primary amino groups of AEMA were considered to be the polymer surface because the ξ-potential of the surface was pos. when the mole fraction of the AEMA units was above 0.2. The antithrombogenic character of the polymer surface modified with heparin was evaluated by both Lee-White and microsphere column methods. The **coagulation** period of human whole blood in the absence of **anticoagulant** in glass tubing coated with the MPC polymer was longer than that in the original glass tube. Cell adhesion was completely inhibited on the MPC polymer surface after contact with human whole blood without **anticoagulant.** However, many adherent blood cells were observed on poly(2-ethylhexyl methacrylate-co-AEMA) (no MPC unit) even after heparinization. These results strongly indicate that the MPC polymer is a useful substrate where the heparin works well and that the heparin-immobilized MPC polymer has superior blood compatibility to the simple MPC polymer.

CC 63-7

ST Miscellaneous Descriptors
phospholipid polymer heparin coated antithrombogenic

RN 25719-51-1 (2-Ethylhexyl methacrylate polymer)
9005-49-6 (Heparin)

RN **182816-96-2**; 503182-41-0; **503182-42-1**

L82 ANSWER 33 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 12

ACCESSION NUMBER: 2000:225730 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13414198008K
TITLE: Crosslinkable coatings from phosphorylcholine-based polymers
AUTHOR(S): Lewis, A. L.; Cumming, Z. L.; Goreish, H. H.; Kirkwood, L. C.; Tolhurst, L. A.; Stratford, P. W.
CORPORATE SOURCE: Research and Development Group, Farnham Business Park, Biocompatibles Ltd., Farnham, Surrey, GU9 8QL, UK.
SOURCE: Biomaterials, (2001) Vol. 22, No. 2, pp. 99-111. CODEN: BIMADU. ISSN: 0142-9612.
COUNTRY: UNITED KINGDOM
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2000:895492
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020313

ED Entered STN: 20011116
Last Updated on STN: 20020313

AB 2-Methacryloyloxyethyl phosphorylcholine (MPC) was synthesized and then used in the preparation of crosslinked polymer membranes with lauryl methacrylate, hydroxypropyl methacrylate and trimethoxysilylpropyl methacrylate (crosslinker) comonomers. Some phys. aspects of the membrane properties were evaluated in order to establish the basis for the synthesis of a series of post-crosslinkable polymers. These materials were made by copolymn. of the constituent monomers via a free radical method, and characterized using NMR, FT-IR, viscometry and elemental anal. The optimum crosslink d. and conditions required for curing coatings of these polymers were investigated using atomic force microscopy (AFM) and showed the inclusion of 5 mol% silyl crosslinking agent to be ideal. A nanoindentation technique was employed to determine if the coating developed elasticity upon crosslinking. The biol. properties of the coatings were evaluated using a variety of protein adsorption **assays** and blood

contacting expts., and an enzyme **immunoassay** was developed to detect E. coli in order to assess the level of bacterial adhesion to these biomaterials. Polymers of this type were shown to be very useful as coating materials for improving the biocompatibility of, or reducing the levels of adherent bacteria to medical devices.

CC 63-7

ST Miscellaneous Descriptors
phosphorylcholine methacrylate copolymer crosslinked coating;
biocompatibility phosphorylcholine methacrylate copolymer

RN **144514-07-8** (3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with dodecyl 2-methyl-2-propenoate)
67881-98-5 (2-Methacryloyloxyethyl phosphorylcholine)

RN **210570-82-4**

L82 ANSWER 34 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 13

ACCESSION NUMBER: 1999:204966 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13205054803B
TITLE: The effect of the chemical structure of the phospholipid polymer on fibronectin adsorption and fibroblast adhesion on the gradient phospholipid surface
AUTHOR(S): Iwasaki, Yasuhiko; Sawada, Shin-Ichi; Nakabayashi, Nobuo; Khang, Gilson; Lee, Hai Bang; Ishihara, Kazuhiko
CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan.
SOURCE: Biomaterials, (1999) Vol. 20, No. 22, pp. 2185-2191. CODEN: BIMADU. ISSN: 0142-9612.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1999:714631
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020403

ED Entered STN: 20011116
Last Updated on STN: 20020403

AB The interaction between biocomponents and the polyethylene (PE) surface modified with poly[ω-methacryloyloxyalkyl phosphorylcholine (MAPC)] was considered taking into account the surface characteristics, i.e., d., mobility, and orientation of the poly(MAPC). The PE surface, grafted gradually with the poly(MAPC) was prepared by corona irradiation method. The amount of peroxide produced on the PE surface which was determined with 1,1-diphenyl-2-picrylhydrazyl, increased with an increase in the energy of the corona. The surface d. of the poly(MAPC) was increased with an increase in the amount of the peroxides produced by the corona irradiation The orientation and mobility of the poly(MAPC) grafted on the PE surface was evaluated with 1,6-diphenyl-1,3,5-hexatriene. The orientation of the poly[6-methacryloyloxyhexyl phosphorylcholine (MHPC)] which has six methylene chains between the phospholipid polar group and the backbone was higher than that of other poly(MAPC)s. The mobility of the poly(MAPC) decreased with an increase in the methylene chain length in the MAPC unit. The fibronectin adsorption on the gradient PE sheet grafted with poly(MAPC) was determined with enzyme-labeled **immunoassay.** The amount of adsorbed fibronectin on the PE grafted with poly[2-methacryloyloxyethyl phosphorylcholine(MPC)] and poly(MHPC) decreased with an increase in their surface d. Especially, the PE sheet grafted with the poly(MHPC) was effectively reduced compared with other poly(MAPC)s. On the poly[10-methacryloyloxydecyl (MDPC)], there is a min. amount of adsorbed

fibronectin. The fibronectin adsorption pattern on the PE sheet grafted with poly(MAPC) was quite different from the chemical structure of the MAPC unit. The human normal diploid fibroblasts (WI-38 cells) were cultured on the gradient PE sheet grafted with poly(MAPC) changing the concentration of seeded WI-38 cells. The adhesion behavior of the WI-38 cells was different depending on the concentration of the seeded WI-38 cells. When the concentration was low, the number of the adherent WI-38 cells had the same tendency as fibronectin adsorption. The gradient PE sheet grafted with the poly(MHPC) effectively reduced WI-38 cells adhesion even when the concentration of the WI-38 cells was high. The biocompatibility of polymer surfaces can be improved by highly oriented phosphorylcholine group.

CC 63-7

ST Miscellaneous Descriptors
polyethylene graft phosphorylcholine methacrylate; fibroblast adhesion
polyethylene graft phosphorylcholine methacrylate; fibronectin absorption polyethylene graft phosphorylcholine methacrylate

RN **252877-49-9; 252877-50-2; 252877-51-3**

L82 ANSWER 35 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 14

ACCESSION NUMBER: 1999:214849 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13208098101A
TITLE: Inhibition of fibroblast cell adhesion on substrate by coating with 2-methacryloyloxyethylphosphorylcholine polymers
AUTHOR(S): Ishihara, Kazuhiko; Ishikawa, Eri; Iwasaki, Yasuhiko; Nakabayashi, Nobuo
CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Tokyo, 113-8656, Japan.
SOURCE: Journal of Biomaterials Science, Polymer Edition, (1999) Vol. 10, No. 10, pp. 1047-1061.
CODEN: JBSEEA. ISSN: 0920-5063.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1999:784811
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020403

ED Entered STN: 20011116
Last Updated on STN: 20020403

AB Fibroblast adhesion and growth behavior were examined on various polymers coated on a poly(ethylene terephthalate) (PET) substrate. The polymers used were poly[2-methacryloyloxyethylphosphorylcholine (MPC)-co-Bu methacrylate] copolymer (PMB)s with different MPC unit compns., and poly(2-hydroxyethyl methacrylate). Surface anal. by dynamic contact angle measurement revealed that the mobility of the polymer chain on the PET substrate depended on the MPC unit composition, but there was no significant difference between the PMBs with 3-10 mol% MPC units and poly(HEMA). Fibronectin adsorption on the polymer surface from a cell culture medium was determined by **immunoassay.** The adsorbed fibronectin was evenly distributed in every polymer, however, the amount was reduced with an increase in the MPC unit composition in the PMB. This result suggested that the MPC unit could weaken the interaction between the polymer surface and proteins. When fibroblast L-929 cells, were cultured on the polymers, the cells adhered and the number of cells increased on not only the hydrophobic poly(BMA) but also on the hydrophilic poly(HEMA). However, the number of cells that adhered on the PMB surface decreased with an increase in the

MPC unit composition This was a result of the fibronectin adsorption behavior. Thus, it could be concluded that since the PMB could suppress cell adhesion proteins e.g. fibronectin, the PMB showed excellent cell adhesive resistance properties.

CC 63-7

ST Miscellaneous Descriptors
fibroblast adhesion inhibition methacryloyloxyethylphosphorylcholine polymer coating

RN **125275-25-4** (Butyl methacrylate-2-methacryloyloxyethylphosphoryl choline copolymer)
25038-59-9 (PET)
25249-16-5 (Poly(2-hydroxyethyl methacrylate))

L82 ANSWER 36 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 16
ACCESSION NUMBER: 1998:191577 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13006071466V
TITLE: Reduced protein adsorption on novel phospholipid polymers
AUTHOR(S): Ishihara, Kazuhiko; Iwasaki, Yasuhiko
CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Tokyo, 113-8656, Japan.
SOURCE: Journal of Biomaterials Applications, (1998) Vol. 13, No. 2, pp. 111-127.
CODEN: JBAPEL. ISSN: 0885-3282.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1998:638100
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020509

ED Entered STN: 20011116
Last Updated on STN: 20020509

AB We have synthesized phospholipid polymers containing 2-methacryloyloxyethyl phosphorylcholine (MPC) units as novel blood compatible polymers and have evaluated their interactions with blood components. It was found that in the absence of **anticoagulants**, blood clotting was delayed and blood cell adhesion and activation were effectively prevented on the MPC copolymer surface. A little amount of protein adsorbed on the MPC copolymer from human plasma was compared with conventional polymers, and the amount was reduced with increasing MPC unit fraction. To clarify the reason for the little protein adsorption on the MPC copolymer, the water structure in the hydrated polymer was examined with attention to the free water fraction. Hydration of the polymers occurred when they were immersed in water. The thermal anal. of these hydrated polymers revealed that the free water fractions in the poly(MPC-co-Bu methacrylate(BMA)) and poly(MPC-co-n-dodecyl methacrylate) were significantly larger than those in the poly(2-hydroxyethyl methacrylate) (HEMA). The conformation of proteins adsorbed on poly(HEMA) changed considerably but that on poly(MPC-co-BMA) was almost the same as the native state. We concluded from these results that the proteins are hardly adsorbed and do not change their original conformation on the polymer surfaces which possess a high free water fraction such as phospholipid polymers.

CC 63-7

ST Miscellaneous Descriptors
protein adsorption phospholipid polymer methacrylate

RN **125275-25-4** (3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate)

144514-07-8 (3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with dodecyl 2-methyl-2-propenoate)
9003-63-8 (Poly(butyl methacrylate))
25249-16-5 (Poly(2-hydroxyethyl methacrylate))
67881-98-5 (2-Methacryloyloxyethyl phosphorylcholine)

L82 ANSWER 37 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN DUPLICATE 17
ACCESSION NUMBER: 1995:55014 TOXCENTER
DOCUMENT NUMBER: PubMed ID: 7622528
TITLE: Adhesion and cytokine production by monocytes on poly(2-methacryloyloxyethyl phosphorylcholine-co-alkyl methacrylate)-coated polymers
AUTHOR(S): DeFife K M; Yun J K; Azeez A; Stack S; Ishihara K; Nakabayashi N; Colton E; Anderson J M
CORPORATE SOURCE: Department of Pathology, Case Western Reserve University, Cleveland, Ohio 44106, USA
CONTRACT NUMBER: HL 33849 (NHLBI)
HL 48771 (NHLBI)
SOURCE: Journal of biomedical materials research, (1995 Apr) 29 (4) 431-9.
Journal Code: 0112726. ISSN: 0021-9304.
COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
FILE SEGMENT: MEDLINE
OTHER SOURCE: MEDLINE 95348144
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20011116
ED Entered STN: 20011116
Last Updated on STN: 20011116
AB Human monocytes isolated from peripheral venous blood were **assayed** for their ability to adhere to various polymers. The culture supernatants were also **assayed** for the cytokines, interleukin-1 beta (IL-beta), interleukin-6 (IL-6), and tumor necrosis factor-alpha (TNF-alpha). The polymers evaluated for adherence and cytokine production included Pellethane, polyethylene and poly[n-butyl methacrylate (BMA)] coated with poly[2-methacryloyloxyethyl phosphorylcholine (MPC)-co-alkyl methacrylate] copolymers. In some experiments the test polymers were adsorbed with fibrinogen or IgG prior to the addition of monocytes. MPC copolymer-coated materials inhibited monocyte and macrophage adhesion after 1 and 8 days of culture relative to corresponding uncoated polymers and tissue culture polystyrene (TCPS). The degree of inhibition by coated Pellethane compared to uncoated Pellethane was the greatest, while inhibition of adhesion by coated poly(BMA) was the least compared to uncoated poly(BMA). However, adhesion was significantly decreased on both coated and uncoated poly(BMA) by day 8. While IL-1 beta, IL-6, and TNF-alpha release was variably influenced by polymer coating, release was consistently inhibited relative to TCPS on day 1. However, cytokine production was not inhibited compared to corresponding uncoated polymers on day 1. With or without protein preadsorption, IL-1 beta release was not detectable in the supernatants of any polymer on day 8, IL-6 production was diminished on day 8, and TNF-alpha production was sustained on day 8. Overall, MPC copolymer-coated and uncoated poly(BMA) were the least stimulating, while TCPS was the most stimulating. (ABSTRACT TRUNCATED AT 250 WORDS)
CT Biocompatible Materials
Cell Adhesion
Cells, Cultured
Humans

*Interleukin-1: SE, secretion
*Interleukin-6: SE, secretion
*Methacrylates
*Monocytes: CY, cytology
*Phosphorylcholine: AA, analogs & derivatives
Polymethacrylic Acids
Polystyrenes
Polyurethanes
Research Support, U.S. Gov't, Non-P.H.S.
Research Support, U.S. Gov't, P.H.S.
Surface Properties
*Tumor Necrosis Factor-alpha: SE, secretion
RN 107-73-3 (Phosphorylcholine)
125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))
9003-63-8 (polybutyl methacrylate)
CN 0 (Biocompatible Materials); 0 (Interleukin-1); 0 (Interleukin-6); 0 (Methacrylates); 0 (Polymethacrylic Acids); 0 (Polystyrenes); 0 (Polyurethanes); 0 (Tumor Necrosis Factor-alpha)

L82 ANSWER 38 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:77416 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA14223435647T
TITLE: Structural Study of DNA Condensation Induced by Novel Phosphorylcholine-Based Copolymers for Gene Delivery and Relevance to DNA Protection
AUTHOR(S): Chim, Y. T. A.; Lam, J. K. W.; Ma, Y.; Armes, S. P.; Lewis, A. L.; Roberts, C. J.; Stolnik, S.; Tendler, S. J. B.; Davies, M. C.
CORPORATE SOURCE: Laboratory of Biophysics and Surface Analysis, School of Pharmacy, The University of Nottingham, Nottingham, NG7 2RD, UK.
SOURCE: Langmuir, (2005) Vol. 21, No. 8, pp. 3591-3598. CODEN: LANGD5. ISSN: 0743-7463.
COUNTRY: UNITED KINGDOM
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2005:180198
LANGUAGE: English
ENTRY DATE: Entered STN: 20050308
Last Updated on STN: 20050531
ED Entered STN: 20050308
Last Updated on STN: 20050531
AB Poly[2-(dimethylamino)ethyl methacrylate-b-2-methacryloyloxyethyl phosphorylcholine] (DMA-MPC) is currently under investigation as a new vector candidate for gene therapy. The DMA block has been previously demonstrated to condense DNA effectively. The MPC block contains a phosphorylcholine (PC) headgroup, which can be found naturally in the outside of the cell membrane. This PC-based polymer is extremely hydrophilic and acts as a biocompatible steric stabilizer. In this study, we assess in detail the morphologies of DNA complexes obtained using the diblock copolymer series DMAxMPC30 (where the mean d.p. of the MPC block was fixed at 30 and the DMA block length was systematically varied) using TEM and liquid atomic force microscopy (AFM). Both techniques indicate more compact complex morphologies (more efficient condensation) as the length of the cationic DMA block increases. However, the detailed morphologies of the DMAxMPC30-DNA complexes observed by TEM in vacuo and by AFM in aqueous medium are different. This phenomena is believed to be related to the highly hydrophilic nature of the MPC block. TEM studies revealed that the

morphol. of the complexes changes from loosely condensed structures to highly condensed rods, toroids, and oval-shaped particles as the DMA moiety increases. In contrast, morphol. changes from plectonemic loops to flowerlike and rectangular blocklike structures, with an increase in highly condensed central regions, are observed by in situ AFM studies. The relative population of each structure is clearly dependent on the polymer mol. composition Enzymic degradation **assays** revealed that only the DMA homopolymer provided effective DNA protection against DNase I degradation, while other highly condensed copolymer complexes, as judged from TEM and gel electrophoresis, only partially protected the DNA. However, AFM images indicated that the same highly condensed complexes have less condensed regions, which we believe to be the initiation sites for enzymic attack. This indicates that the open structures observed by AFM of the DNA complexation by the DMAxMPC30 copolymer series are closer to in vivo morphol. when compared to TEM.

CC 63-6

ST Miscellaneous Descriptors
DNA phosphorylcholine copolymer gene delivery

RN **409334-34-5** (2-(Dimethylamino)ethyl methacrylate-2-methacryloyloxyethyl phosphorylcholine block copolymer)

L82 ANSWER 39 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:246857 TOXCENTER
COPYRIGHT: Copyright (c) 2005 The Thomson Corporation
DOCUMENT NUMBER: 42-16504
TITLE: Novel biocompatible phosphorylcholine-based self-assembled nanoparticles for drug delivery
AUTHOR(S): Salvage, JP; Rose, SF; Phillips, GJ; Lloyd, AW; Lewis, AL; et al
CORPORATE SOURCE: Univ Brighton, Sch Pharm & Biomol Sci, Moulsecoomb, Brighton BN2 4GJ, E Sussex, England
SOURCE: Journal of Controlled Release (Netherlands), (2005) Vol. 104, pp. 259-270. 35 Refs.
CODEN: JCREEC. ISSN: 0168-3659.
DOCUMENT TYPE: Journal
FILE SEGMENT: IPA
OTHER SOURCE: IPA 2005:16478
LANGUAGE: English
ENTRY DATE: Entered STN: 20050920
Last Updated on STN: 20050920

ED Entered STN: 20050920
Last Updated on STN: 20050920

AB Major challenges associated with nano-sized drug delivery systems include removal from systemic circulation by phagocytic cells and controlling appropriate drug release at target sites. 2-methacryloyloxyethyl phosphorylcholine (MPC) has been copolymerised in turn with two pH responsive comonomers (2-(diethylamino)ethyl methacrylate (DEA) and 2-(diisopropylamino)ethyl methacrylate (DPA), to develop novel biocompatible drug delivery vehicles. Micelles were prepared from a series of copolymers with varying block compositions and their colloidal stability and dimensions were assessed over a range of solution pH using photon correlation spectroscopy. The drug loading capacities of these micelles were evaluated using Orange OT dye as a model compound. The cytotoxicity of the micelles was assessed using an in vitro **assay** . The MPC-DEA diblock copolymers formed micelles at around pH 8 and longer DEA block lengths allowed higher drug loadings. However, these micelles were not stable at physiological pH. In contrast, MPC-DPA diblock copolymers formed micelles of circa 30 nm diameter at physiological pH. In vitro **assays** indicated that these MPC-DPA diblock copolymers had negligible cytotoxicities. Thus novel non-toxic

biocompatible micelles of appropriate size and good colloidal stability with pH-modulated dug uptake and release can be readily produced using MPC-DPA diblock copolymers. (C) 2005 Elsevier B.V All rights reserved.

SC 9 Pharmaceutics

ST Miscellaneous Descriptors
2-Methacryloyloxyethyl phosphorylcholine; micelles
2-(Diisopropylamino)ethyl methacrylate; micelles
N,N-Diethylaminoethyl methacrylate; micelles
Nanoparticles; 2-methacryloyloxyethyl phosphorylcholine
Copolymers; 2-methacryloyloxyethyl phosphorylcholine
Stability; 2-methacryloyloxyethyl phosphorylcholine
Micelles; 2-methacryloyloxyethyl phosphorylcholine
Particle size; 2-methacryloyloxyethyl phosphorylcholine
Toxicity; 2-methacryloyloxyethyl phosphorylcholine
Nanoparticles; 2-(diisopropylamino)ethyl methacrylate
Copolymers; 2-(diisopropylamino)ethyl methacrylate
Stability; 2-(diisopropylamino)ethyl methacrylate
Micelles; 2-(diisopropylamino)ethyl methacrylate
Particle size; 2-(diisopropylamino)ethyl methacrylate
Toxicity; 2-(diisopropylamino)ethyl methacrylate
Nanoparticles; n,n-diethylaminoethyl methacrylate
Copolymers; n,n-diethylaminoethyl methacrylate
Stability; n,n-diethylaminoethyl methacrylate
Micelles; n,n-diethylaminoethyl methacrylate
Particle size; n,n-diethylaminoethyl methacrylate
Toxicity; n,n-diethylaminoethyl methacrylate

RN **67881-98-5** (2-Methacryloyloxyethyl phosphorylcholine)
16715-83-6 (2-(Diisopropylamino)ethyl methacrylate)
105-16-8 (N,N-Diethylaminoethyl methacrylate)

L82 ANSWER 40 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:44317 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA142183418l7W
TITLE: In situ modification on cellulose acetate hollow fiber membrane modified with phospholipid polymer for biomedical application
AUTHOR(S): Ye, Sang Ho; Watanabe, Junji; Iwasaki, Yasuhiko; Ishihara, Kazuhiko
CORPORATE SOURCE: Department of Materials Engineering, School of Engineering, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8656, Japan.
SOURCE: Journal of Membrane Science, (2005) Vol. 249, No. 1-2, pp. 133-141.
CODEN: JMESDO. ISSN: 0376-7388.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2005:124799
LANGUAGE: English
ENTRY DATE: Entered STN: 20050215
Last Updated on STN: 20050426

ED Entered STN: 20050215
Last Updated on STN: 20050426

AB The hollow fiber membrane (HFM) made from synthetic polymers need improvement in terms of hemocompatibility or biocompatibihty, for use in the medical field. In this study, cellulose acetate (CA) HFM modified with the water-soluble amphiphilic 2-methacryloyloxyethyl phosphorylcholine (MPC) copolymer (poly (MPC-co-Bu methacrylate) (PMB80, MPC:BMA = 80:20 (mol%)) was prepared by a dry-jet wet spinning process. The PMB80 was

coated on the CA HFM surface in situ during the phase inversion of the dope solution by using a PMB80 solution as an inner **coagulant.** The CA/PMB80 coating HFM showed no phys. structure changes in comparison with the CA HFM prepared using the same preparative conditions. The structure and permeability of the CA/PMB80 coating HFM was controllable by changing the preparative conditions. From the results of the X-ray photoelectron spectroscopic (XPS) observations, the amount of modification was changed with the concentration of PMB80 in the **coagulant.** The XPS signal attributed to the phosphorus atom of the PMB80 remained even after 1 mo of rinsing with distilled water. Also, the CA/PMB80 coated HFM showed good permeability and a low membrane fouling property in comparison with the non-modified CA HFM, due to the low protein adsorption property of the PMB80.

CC 63-8

ST Miscellaneous Descriptors
cellulose acetate hollow fiber membrane phospholipid polymer biomedical

RN **125275-25-4** (Butyl methacrylate-2-methacryloyloxyethyl phosphorylcholine copolymer)

RN 9004-35-7

L82 ANSWER 41 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:108846 TOXCENTER

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DOCUMENT NUMBER: CA14118296374R

TITLE: Amphiphilic block copolymers based on poly(2-acryloyloxyethyl phosphorylcholine) prepared via RAFT polymerisation as biocompatible nanocontainers

AUTHOR(S): Stenzel, Martina H.; Barner-Kowollik, Christopher; Davis, Thomas P.; Dalton, Helen M.

CORPORATE SOURCE: Centre for Advanced Macromolecular Design, School of Chemical Engineering and Industrial Chemistry, The University of New South Wales, Sydney, NSW 2031, Australia.

SOURCE: Macromolecular Bioscience, (2004) Vol. 4, No. 4, pp. 445-453.
CODEN: MBAIBU. ISSN: 1616-5187.

COUNTRY: AUSTRALIA

DOCUMENT TYPE: Journal

FILE SEGMENT: CAPLUS

OTHER SOURCE: CAPLUS 2004:371833

LANGUAGE: English

ENTRY DATE: Entered STN: 20040511
Last Updated on STN: 20041229

ED Entered STN: 20040511
Last Updated on STN: 20041229

AB Amphiphilic block copolymers composed of poly(Bu acrylate) and poly(2-acryloyloxyethyl phosphorylcholine) have been prepared using reversible addition fragmentation transfer (RAFT) polymerization The conversion of the polymerization was determined using online FT NIR spectroscopy. NMR spectroscopy was used not only to support the results obtained from FT NIR spectroscopy but also prove the formation of micelles. Due to the strong aggregation tendency of these block copolymers and the resulting difficulties concerning the mol. weight anal. test expts. were carried out replacing poly(2-acryloyloxyethyl phosphorylcholine) with poly(2-hydroxyethyl acrylate). Micelle size and the aggregation behavior were investigated using dynamic light scattering. The sizes of the nanocontainers obtained were found to be influenced by the block length as well as the solvent leading to micelles in the range between 40 and 160 nm. The toxicity of

the RAFT agent used was then analyzed by cell growth inhibition tests.
CC 35-7
ST Miscellaneous Descriptors
RAFT polymn block amphiphilic polyacrylate synthesis; aggregation micelle hydrodynamic radius acryloyloxyethyl phosphorylcholine block copolymer; cytotoxicity **assay** phenylmethylthiothioxomethylthi o propanoic acid RAFT initiator
RN **765206-20-0** (Butyl acrylate-2-acryloyloxyethyl phosphorylcholine diblock copolymer)
765276-02-6 (Butyl acrylate-2-hydroxyethyl acrylate diblock copolymer)
RN 497931-76-7

L82 ANSWER 42 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:84930 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA14115248491E
TITLE: Phosphorylcholine-containing polymers for use in cell encapsulation
AUTHOR(S): Yang, Ying; Zhang, Sifu; Jones, Graham; Morgan, Noel; El Haj, Alicia J.
CORPORATE SOURCE: Centre for Science and Technology in Medicine, School of Medicine, Keele University/University Hospital of North Staffordshire, Stoke-on-Trent, Staffs, UK.
SOURCE: Artificial Cells, Blood Substitutes, and Biotechnology, (2004) Vol. 32, No. 1, pp. 91-104.
CODEN: ACBSDA.
COUNTRY: UNITED KINGDOM
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2004:278630
LANGUAGE: English
ENTRY DATE: Entered STN: 20040413
Last Updated on STN: 20041229
ED Entered STN: 20040413
Last Updated on STN: 20041229
AB A model system for encapsulation of pancreatic islets which has potential properties for improving biocompatibility and **immunosuppression** was investigated. In vitro and in vivo studies have shown that phosphorylcholine-containing polymers have high biocompatibility due to low adsorption of proteins and reduced thrombus formation. Encapsulation of islets isolated from rats with a compound membrane composed of phosphorylcholine-containing polymers and cellulose acetate led to rapid insulin production and diffusion across the membrane in response to glucose challenge. The phosphorylcholine-containing polymer had a mol. weight of about 1.3 + 104 Da. The polymer-coated membrane excluded larger mols. such as IgG (mol. weight 150 kDa), thereby acting as a phys. **immuno** -barrier, but allowed smaller mols. such as glucose and insulin to pass through.
CC 63-5
ST Miscellaneous Descriptors
phosphorylcholine encapsulation pancreatic islet
RN 9004-10-8 (Insulin)
9004-35-7 (Cellulose acetate)
125275-25-4 (2-MethacryloyloxyethylPhosphorylcholine-butyl methacrylate copolymer)

L82 ANSWER 43 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:149311 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA14103042760H

TITLE: In vitro and ex vivo blood compatibility study of 2-methacryloyloxyethyl phosphorylcholine (MPC) copolymer-coated hemodialysis hollow fibers
AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Chiyoda-ku, Tokyo, 101-0062, Japan.
SOURCE: Journal of Artificial Organs, (2003) Vol. 6, No. 4, pp. 260-266.
CODEN: JAORFN. ISSN: 1434-7229.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2003:1000315
LANGUAGE: English
ENTRY DATE: Entered STN: 20040707
Last Updated on STN: 20041214

ED Entered STN: 20040707
Last Updated on STN: 20041214

AB To identify the advantages of 2-methacryloyloxyethyl phosphorylcholine (MPC) copolymer-coated polysulfone (PSf) hollow fibers for hemodialyzer and hemofilter minimodules with hollow fibers were made and blood compatibility was evaluated in vitro and ex vivo. Three types of hollow fibers, i.e., pure PSf (no additives), PSf alloyed with poly(1-vinyl-2-pyrrolidone) (PVPy), and PSf coated with the MPC copolymer, were processed in wet conditions. Com. available hollow fibers (APS) were used as a control sample. The PSf hollow fibers have a condensed structure. A porous structure was observed when the PVPy was alloyed before wet processing, and no effect of the innercoated MPC copolymer on the porous structure was observed One-tenth-sized minimodules of the conventional hemodialyzer were fabricated with 200 fibers each. The solute permeability of the hollow fibers was evaluated using 10% bovine serum in a buffer solution containing cytochrome C, which is a model protein of B2-microglobulin. After circulation for 2.5 h, the solute permeability of APS and PVPy-alloyed PSf hollow fibers decreased to 50% compared with their initial values. In contrast, the value for the hollow fibers innercoated with the MPC copolymer maintained its initial level. The inner surface of the dialysis membranes was observed with a transmission electron microscope and a layer of adsorbed protein on the PSf, APS, and PVPy-alloyed PSf hollow fibers was observed, but not on the MPC copolymer-coated fibers. Blood cell adhesion was then evaluated by circulation of whole rabbit blood without any **anticoagulant** ex vivo. Many adherent cells were observed on the PVPy-alloyed PSf hollow fibers; however, blood cells did not adhere or aggregate on the MPC copolymer-coated hollow fibers. From these results, we concluded that the in-situ coating of MPC copolymer on PSf hollow fibers is effective in preventing blood **coagulation** and maintaining the solute permeability of the fibers.

CC 63-7
ST Miscellaneous Descriptors
blood compatibility methacrylic phosphorylcholine copolymer polysulfone hemodialysis hollow fiber
RN 9007-43-6 (Cytochrome C)
9003-39-8 (Poly(1-vinyl-2-pyrrolidone))
RN **393587-07-0**

L82 ANSWER 44 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:306221 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA14009133678H

TITLE: Nonthrombogenic hemodialyzer with MPC copolymer
AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Kanda-surugadai, Chiyoda-ku, Tokyo, 101-0062, Japan.
SOURCE: Advances in Science and Technology (Faenza, Italy), (2003) Vol. 41, No. Materials in Clinical Applications VI, pp. 161-170.
CODEN: ASETE5.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2003:445247
LANGUAGE: English
ENTRY DATE: Entered STN: 20031230
Last Updated on STN: 20050628
ED Entered STN: 20031230
Last Updated on STN: 20050628
AB Development of non-thrombogenic dialysis membrane was aimed. Copolymers of 2-methacryloyloxyethyl phosphorylcholine (MPC) showed good hemocompatibility. They were introduced on the blood-contacting surface of hemodialysis cellulose and polysulfone membranes without adverse effect on mech. properties and permeability. Ex-vivo single pass of rabbit blood through the mini-modules without an **anticoagulant** was performed for 0.5 h and blood cells did not attach on the surface. It was concluded that the modified hollow fibers with MPC copolymers are promising to develop a hemodialyzer, which does not require **anticoagulants.** MPC polymer surface could form self-assembled biomimetic membrane by accumulating phospholipids from blood stream and show non-thrombogenicity. MPC is available from NOF Co., in Tokyo.
CC 63-7
ST Miscellaneous Descriptors
methacryloyloxyethyl phosphorylcholine copolymer hemodialyzer membrane cellulose polysulfone blood biocompatibility; platelet antithrombogenic hemodialysis membrane implant methacryloyloxyethyl phosphorylcholine copolymer
RN 60-27-5 (Creatinine)
9007-43-6 (Cytochrome C)
67881-99-6 (2-Methacryloyloxyethyl-phosphorylcholine polymer)
9004-67-5 (Methyl cellulose)
RN **142146-61-0; 182816-96-2**

L82 ANSWER 45 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:196361 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13908122556V
TITLE: Preparation and blood compatibility of phosphorylcholine-bonded O-butyrylchitosan
AUTHOR(S): Zhu, Aiping; Shan, Bing; Yuan, Youling; Shen, Jian
CORPORATE SOURCE: Department of Polymer Science and Engineering, Nanjing University, Nanjing, 210093, Peop. Rep. China.
SOURCE: Polymer International, (2003) Vol. 52, No. 1, pp. 81-85.
CODEN: PLYIEI. ISSN: 0959-8103.
COUNTRY: CHINA
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2003:134342
LANGUAGE: English
ENTRY DATE: Entered STN: 20030812
Last Updated on STN: 20030819

ED Entered STN: 20030812
Last Updated on STN: 20030819
AB 2-Methacryloyloxyethyl phosphorylcholine (MPCE) was synthesized using phosphorus trichloride, ethylene glycol, 2-hydroxyethyl methacrylate and triethylamine, and then used in the preparation of O-butyrylchitosan-bonded MPCE (MPCE-BCS) by Michael addition of MPCE to amino groups of O-butyrylchitosan. The structures of MPCE and MPCE-BCS were characterized by FTIR and 1H NMR. The blood-compatibility of MPCE-BCS was evaluated by means of blood clotting and platelet adhesion **assays.** The blood-clotting **assay** indicated that O-butyrylchitosan was haemocompatible. Both the blood-clotting **assay** and platelet adhesion **assay** confirmed that MPCE-BCS had excellent antithrombogenicity.
CC 63-5
ST Miscellaneous Descriptors
chitosan phosphorylcholine deriv blood compatibility
anticoagulant
RN 9012-76-4Q (Chitosan, reaction product with 2-Methacryloyloxyethyl phosphorylcholine)
106-31-0 (Butyric anhydride)
107-21-1 (Ethylene glycol)
121-44-8 (Triethylamine)
868-77-9 (2-Hydroxyethyl methacrylate)
7719-12-2 (Phosphorus trichloride)
9012-76-4 (Chitosan)
822-39-9 (2-Chloro-1,3,2-dioxaphospholane)
6609-64-9 (2-Chloro-2-oxo-1,3,2-dioxaphospholane)
RN **312490-87-2**; 124384-94-7; 82793-19-9

L82 ANSWER 46 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:171883 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13322313528Y
TITLE: Photoinduced graft polymerization of 2-methacryloyloxyethyl phosphorylcholine on polyethylene membrane surface for obtaining blood cell adhesion resistance
AUTHOR(S): Ishihara, K.; Iwasaki, Y.; Ebihara, S.; Shindo, Y.; Nakabayashi, N.
CORPORATE SOURCE: Graduate School of Engineering, Department of Materials Science, The University of Tokyo, Tokyo, 113-8656, Japan.
SOURCE: Colloids and Surfaces, B: Biointerfaces, (2000) Vol. 18, No. 3,4, pp. 325-335.
CODEN: CSBBEQ. ISSN: 0927-7765.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2000:507676
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020409
ED Entered STN: 20011116
Last Updated on STN: 20020409
AB Phospholipid polymer, poly[2-methacryloyloxyethyl phosphorylcholine (MPC)], was grafted with polyethylene (PE) membrane using photoinduced polymerization technique to make the membrane resistant to cell adhesion. The water contact angle on the PE membrane grafted with poly(MPC) decreased with an increase in the photopolymn. time. This decrease corresponded to the increase in the amount of poly(MPC) grafted on the PE surface. The same graft polymerization procedure was applied using other hydrophilic monomers, such

as acrylamide (AAm), N-vinylpyrrolidone (VPy) and methacryloyl poly(ethylene glycol) (MPEG). These monomers were also polymerized to form grafted chains on the PE membrane, and the grafting was confirmed with XPS. Anal. of amount and distribution of plasma proteins at the plasma-contacting surface of the original and the modified PE membranes were analyzed using **immunogold assay.** The grafting of poly(MPC) and poly(VPy) on PE membrane reduced the plasma protein adsorption significantly compared with that on the original PE membrane. However, the PE membranes grafted with poly(AAm) or poly(MPEG) did not show any effects on protein adsorption. Platelet adhesion on the original and modified PE membranes from platelet-rich plasma was also examined A large number of platelets adhered and activated on the original PE membrane. Grafting with poly(AAm) did not suppress platelet adhesion, but grafting with poly(MPC) or poly(VPy) on the PE membrane was effective in preventing platelet adhesion. It is concluded that the introduction of the phosphorylcholine group on the surface could decrease the cell adhesion to substrate polymer.

CC 63-7

ST Miscellaneous Descriptors
photopolymn methacryloxyloxyethyl phosphorylcholine polyethylene biocompatibility; blood adhesion photopolymn methacryloxyloxyethylphosphorylcholine polyethylene

RN 108144-73-6 (3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-propenamide, graft)
252877-49-9 (3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethene, graft)

RN 176587-89-6; 220830-40-0

L82 ANSWER 47 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:129717 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13625390798A
TITLE: Bioinspired phospholipid polymer biomaterials for making high performance artificial organs
AUTHOR(S): Ishihara, K.
CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Tokyo, 113-8656, Japan.
SOURCE: Science and Technology of Advanced Materials, (2000) Vol. 1, No. 3, pp. 131-138.
CODEN: STAMCV. ISSN: 1468-6996.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2001:678942
LANGUAGE: English
ENTRY DATE: Entered STN: 20020612
Last Updated on STN: 20020618

ED Entered STN: 20020612
Last Updated on STN: 20020618

AB A review. Novel polymer biomaterials, which can be used in contact with blood, are prepared with strong inspiration from the surface structure of biomembrane. That is, the polymers with a phospholipid polar group in the side chain, 2-methacrylooyloxyethyl phosphorylcholine (MPC) polymers were synthesized. The MPC polymers can inhibit surface-induced clot formation effectively, when they are in contact with blood even in the absence of an **anticoagulant.** This phenomenon was due to the reduction of plasma protein and suppression of denaturation of adsorbed proteins, that is the

MPC polymers interact with blood components very mildly. As the mol. structure of the MPC polymer was easily designed by changing the monomer units and their composition, it could be applied to surface modification of artificial organs and biomedical devices for improving blood and tissue compatibility. Thus, the MPC polymers are useful polymer biomaterials for manufacturing high performance artificial organs and biomedical devices to provide safe medical treatments.

CC 63-0

ST Miscellaneous Descriptors
review phospholipid polymer biomaterial; methacryloyloxyethyl phosphocholine polymer biomaterial review

RN **67881-99-6** (Poly(2-methacryloyloxyethylphosphocholine))

L82 ANSWER 48 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:156977 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13324340029T
TITLE: Control of cell adhesion and proliferation on MPC-BMA copolymer surface
AUTHOR(S): Watanabe, Akihiko; Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: Dep. of Org. Mater., Div. of Biomater. Inst. of Biomater. and Bioeng., Tokyo Med. and Dent. Univ., Japan.
SOURCE: Seitai Zairyo Kogaku Kenkyusho Hokoku (Tokyo Ika Shika Daigaku), (2000) Vol. 33, pp. 38-43.
CODEN: SZKHF9.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 2000:393744
LANGUAGE: Japanese
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020403

ED Entered STN: 20011116
Last Updated on STN: 20020403

AB A review with 12 refs. For many medical applications of biomaterials, reduction or elimination of cell adhesion is desirable to enhance biocompatibility (Drumheller and Hubell, 1995). Adhesion of cells to an implant surface results from the protein adsorbed there. If protein adsorption can be prevented, cellular attachment will be suppressed. Copolymers of methacryloyloxyethyl phosphorylcholine (MPC) have affinity for phospholipids due to the phosphorylcholine polar groups on the MPC copolymer surface (Ishihara et al., 1990). When MPC copolymers are placed in contact with plasma, phospholipids are adsorbed and accumulated. They rearrange to create an organized layer which interacts mildly with proteins, thus preventing the adsorption of proteins on the material surface (Ishihara et al., 1992). The organized lipid layer on the material mimics a biomembrane surface. MPC copolymers have been investigated for blood-contacting applications and were found to possess excellent resistance against protein and platelet adhesion when exposed to platelet-rich plasma and whole blood even in the absence of an **anticoagulant** (Ishihara et al., 1991 and 1992). These copolymers may be suitable to for improving implant surfaces in applications where inhibition of cellular attachment is desired. In the present study, the adhesion of fibroblast cells in vitro to surfaces coated with an MPC copolymer was examined in comparison with a non-coated surface.

CC 63-0

ST Miscellaneous Descriptors
review biocompatible implant methacryloyloxyethylphosphorylcholine copolymer

RN **125275-25-4**

L82 ANSWER 49 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:184688 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA131243274520
TITLE: Modification of polysulfone with phospholipid polymer for improvement of the blood compatibility. Part 2. Protein adsorption and platelet adhesion
AUTHOR(S): Ishihara, Kazuhiko; Fukumoto, Kikuko; Iwasaki, Yasuhiko; Nakabayashi, Nobuo
CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Tokyo, 113-8656, Japan.
SOURCE: Biomaterials, (1999) Vol. 20, No. 17, pp. 1553-1559. CODEN: BIMADU. ISSN: 0142-9612.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1999:569969
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020509
ED Entered STN: 20011116
Last Updated on STN: 20020509
AB Protein adsorption and platelet adhesion from human plasma on polysulfone (PSf) membranes modified with 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer were studied. The modification was carried out by blending of the MPC polymer in the PSf. The amount of protein adsorbed on the PSf/MPC polymer blend membrane was significantly decreased with an increase in the composition of the blended MPC polymer. The distribution of the specific proteins adsorbed on the membrane surface was also determined by a gold-colloid **immunoassay.** Albumin, γ-globulin and fibrinogen were observed on every membrane surface after contact with plasma. However, in the case of the blended membrane, the d. of the adsorbed proteins decreased compared with that of original PSf membrane. That is, the MPC polymer blended in the membrane could function as a protein-adsorption-resistant additive. The number of platelets adhered on the PSf membrane was reduced, and change in the morphol. of adherent platelets was also suppressed by the modification with the MPC polymer. Therefore, the PSf/MPC polymer blend membrane had improved blood compatibility compared with the PSf membrane.
CC 63-7
ST Miscellaneous Descriptors
polysulfone membrane phospholipid polymer biocompatibility; protein adsorption polysulfone membrane phospholipid polymer; platelet adhesion polysulfone membrane phospholipid polymer
RN **125275-25-4**; **144514-07-8**; 28776-63-8

L82 ANSWER 50 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:209043 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13206069285H
TITLE: The development of in vitro biocompatibility tests for the evaluation of intraocular biomaterials
AUTHOR(S): Lloyd, A. W.; Dropcova, S.; Faragher, R. G. A.; Gard, P. R.; Hanlon, G. W.; Mikhalovsky, S. V.; Olliff, C. J.; Denyer, S. P.
CORPORATE SOURCE: Drug Delivery & Biomaterials Research Group, School of Pharmacy and Biomolecular Sciences, University of

Brighton, Brighton, BN2 4GJ, UK.
SOURCE: Journal of Materials Science: Materials in Medicine, (1999) Vol. 10, No. 10/11, pp. 621-627.
CODEN: JSMMEL. ISSN: 0957-4530.
COUNTRY: UNITED KINGDOM
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1999:742634
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020403
ED Entered STN: 20011116
Last Updated on STN: 20020403
AB Recent developments in ocular implant technol. require the in vitro evaluation of ocular compatibility in early stage development programs. This requires an understanding and appreciation of the biol. interactions which occur in the ocular environment and their relevance with respect to the clin. complications associated with surgical implantation of devices. This paper describes the development of a series of clin. reflective in vitro **assays** for assessing the potential ocular compatibility of novel intraocular lens materials. Staphylococcus epidermidis attachment, fibrinogen adsorption, mouse embryo fibroblast 3T3 adhesion and proliferation, primary rabbit lens cell adhesion, human peripheral blood macrophage adhesion and granulocyte activation tests were employed to evaluate two widely used intraocular biomaterials poly(Me methacrylate) (PMMA) and silicone, and a novel biomimetic phosphorylcholine-based coating (PC). The performance of these materials in the in vitro **assays** was compared to their ability to reduce postoperative inflammation in vivo in a rabbit model. The results demonstrated that the in vitro **assays** described here are predictive of in vivo ocular compatibility. These **assays** offer a more relevant means of assessing the ocular compatibility of biomaterials than those presently required by the authorities for regulatory approval of medical devices and implants.
CC 63-7
ST Miscellaneous Descriptors
intraocular biomaterial biocompatibility polymer; cell adhesion intraocular biomaterial biocompatibility
RN 9011-14-7 (PMMA)
67881-98-5Q (2-Methacryloyloxyethylphosphorylcholine, copolymers)

L82 ANSWER 51 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:148015 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13110134558V
TITLE: Competitive adsorption between phospholipid and plasma protein on a phospholipid polymer surface
AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Nakatani, Masako; Mihara, Takashi; Kurita, Kimio; Ishihara, Kazuhiko
CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan.
SOURCE: Journal of Biomaterials Science, Polymer Edition, (1999) Vol. 10, No. 5, pp. 513-529.
CODEN: JBSEEA. ISSN: 0920-5063.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1999:310610
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116

Last Updated on STN: 20020423
ED Entered STN: 20011116
Last Updated on STN: 20020423
AB The competitive adsorption of proteins and phospholipids on ω-methacryloyloxyalkyl phosphorylcholine (MAPC) polymer was evaluated in this study. Albumin, fibrinogen, and dimyristoylphosphatidylcholine (DMPC) were used as model components. The amount of DMPC adsorbed on the MAPC polymers increased with an increase in the MAPC unit composition of the polymer. The methylene chain length of the MAPC unit was another factor influencing the DMPC adsorption when the MAPC unit composition of the MAPC polymer was low. The state of albumin and DMPC liposome adsorbed on the 2-methacryloyloxyethyl phosphorylcholine (MPC) polymer was determined by dynamic contact angle (DCA) measurement. The adsorption strength of albumin on the MPC polymer was weaker than that on the poly[n-Bu methacrylate (BMA)], i.e., the albumin was detached from the MPC polymer during the rinsing process. On the poly(BMA) surface, no difference in the shape of the DCA loops before and after contact with the DMPC liposomal suspension was observed Fibrinogen adsorption on the MAPC polymer was detected by gold-colloid labeled **immunoassay.** The amount of fibrinogen adsorbed on every MAPC polymer surface was reduced by addition of the DMPC liposome in the fibrinogen solution The number of platelets adhered on the MAPC polymer was also decreased when the DMPC liposome was present in the fibrinogen solution during pretreatment. We concluded that phospholipids were preferentially adsorbed on the MAPC polymer surface compared with plasma protein and that the adsorbed phospholipids played an important role in showing an excellent blood compatibility on the MAPC polymer.
CC 63-7
ST Miscellaneous Descriptors
methacryolyoxyalkyl phosphorylcholine polymer adsorption phospholipid protein
RN **125275-25-4** (Butyl methacrylate-2-methacryloyloxyethyl phosphorylcholine copolymer)
18656-38-7 (Dimyristoylphosphatidylcholine)
RN **158760-97-5; 197913-20-5**

L82 ANSWER 52 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:102775 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA12809102541F
TITLE: Zwitterionic and reactive group-containing vinyl polymers for blood-compatible surface coatings
AUTHOR(S): Bowers, Roderick W. J.; Jones, Stephen A.; Stratford, Peter W.; Charles, Stephen A.
CORPORATE SOURCE: ASSIGNEE: Biocompatibles Ltd.
PATENT INFORMATION: US 5705583 A 6 Jan 1998
SOURCE: (1998) U.S., 29 pp., Cont.-in-part of U.S. Ser. No. 175,348.
CODEN: USXXAM.
COUNTRY: UNITED KINGDOM
DOCUMENT TYPE: Patent
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1998:31161
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020605
ED Entered STN: 20011116
Last Updated on STN: 20020605
AB Polymers of ≥1 radical polymerizable monomers have pendant groups

bearing a center of permanent pos. charge and other pendant groups capable of stably binding the polymer to a surface, addnl. reactive groups in the polymer may serve as points for attachment of ligands to the polymer. The polymers may contain pendant groups which bind the polymer to a surface by physisorption, covalent bonding or ionic interactions. Thus, a coating of poly(2(methacryloyloxyethyl)-2'(trimethylammonium)ethyl phosphate inner salt-n-dodecyl methacrylate) (1:2) applied to PVC tubing showed no effect on blood pumping with or without **anticoagulant**, compared to an untreated PVC tubing which required **anticoagulant.**

CC 35-4

ST Miscellaneous Descriptors
zwitterionic acrylic polymer coating; ammonium phosphate zwitterionic acrylic polymer; biocompatible coating acrylic inner salt polymer; dodecyl methacrylate copolymer coating; crosslinkable monomer zwitterionic acrylic polymer; blood compatible coating zwitterionic acrylic polymer

RN 7719-12-2 (Phosphorous trichloride)
7429-90-5 (Aluminum)
9002-86-2 (PVC)
9002-88-4 (Polyethylene)
12597-69-2 (Steel)
107-21-1 (1,2-Ethanediol)
868-77-9 (2-Hydroxyethyl methacrylate)
920-46-7 (Methacryloyl chloride)
1120-71-4 (Propane sultone)
25265-75-2 (Butanediol)
41862-94-6 (Dodec-7-yn-1-ol)

RN **144514-07-8**; **144514-08-9**; **146109-91-3**; **150120-09-5**; **150120-10-8**; **150120-11-9**; **150120-12-0**; **150120-14-2**; **150120-16-4**; **150120-17-5**; **150120-18-6**; **150120-19-7**; **166195-20-6**; **201359-42-4**; **201359-43-5**; **201359-44-6**; **201425-85-6**; **67881-98-5**; 150120-13-1; **150120-15-3**; 150205-71-3; 822-39-9; 6609-64-9; 82793-19-9; 92035-97-7; 144026-20-0; 144026-21-1; 150205-72-4; 818-61-1; 2867-47-2; 30030-25-2

L82 ANSWER 53 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:114772 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA13024329064T
TITLE: Preparation of phospholipid-accumulated surface for creation of a new biocompatible material
AUTHOR(S): Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: Inst. Med. Dent. Eng., Tokyo Med. Dent. Univ., Tokyo, 101-0062, Japan.
SOURCE: Iyo Kizai Kenkyusho Hokoku (Tokyo Ika Shika Daigaku), (1998) Vol. 32, pp. 14-22.
CODEN: IKKHBS. ISSN: 0082-4739.
COUNTRY: JAPAN
DOCUMENT TYPE: Journal
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1999:86719
LANGUAGE: Japanese
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020521

ED Entered STN: 20011116
Last Updated on STN: 20020521

AB A review with 28 refs. Chemical compds. having phospholipid polar groups are interesting from the viewpoint not only of polymer chemical, but also of

biol., medical, and life sciences. Phospholipids, one of the main components of biomembrane, form a bilayer structure used to construct a biomembrane. Recently, many researchers have been attempting to prepare a phospholipid-accumulated surfaces to develop a new biocompatible material using phospholipid liposome, self-assembling monolayer (SAM), or polymeric phospholipids. In this review, we report the preparation of phospholipid-accumulated surfaces and their properties. We also prepared a methacrylate having a phosphorylcholine group, 2-methacryloyloxyethyl phosphorylcholine (MPC), to make a new biocompatible polymeric material. The competitive adsorption of proteins and phospholipids on the MPC polymer was evaluated using albumin, fibrinogen, and dimyristoyl phosphatidylcholine (DMPC) as model components, resp. The amount of DMPC adsorbed on the MPC polymers increased with an increase in the MPC composition in the polymer. The state of albumin and DMPC liposome adsorbed on the MPC polymer was determined by dynamic contact angle (DCA) measurement. The albumin adsorbed on the MPC polymer was much easily detached compared with that on the poly(Bu methacrylate). On the poly(Bu methacrylate) surface, no difference in the shape of the DCA loops before and after contact with the DMPC liposomal suspension was observed Fibrinogen adsorption on the MPC polymer was detected by gold-colloid labeled **immunoassay.** The amount of fibrinogen adsorbed on the MPC polymer surface with 10 mol% MPC was reduced by addition of the DMPC liposome in the fibrinogen solution The application of MPC polymer for improving the tribol. property of elastomer, new material for orthopedic bearing, is also reported in this review. We concluded that the creation of a phospholipid-accumulated surface is very useful method for obtaining biocompatibility on biomedical polymers.

CC 63-0

ST Miscellaneous Descriptors
review phospholipid surface biocompatible medical goods

RN **67881-99-6** (2-Methacryloyloxyethyl phosphorylcholine polymer)

L82 ANSWER 54 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1997:191266 TOXCENTER
COPYRIGHT:	Copyright 2005 ACS
DOCUMENT NUMBER:	CA12719267962M
TITLE:	Reduction of surface-induced platelet activation on phospholipid polymer
AUTHOR(S):	Iwasaki, Yasuhiko; Mikami, Asako; Kurita, Kimio; Yui, Nobuhiko; Ishihara, Kazuhiko; Nakabayashi, Nobuo
CORPORATE SOURCE:	Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Tokyo, 101, Japan.
SOURCE:	Journal of Biomedical Materials Research, (1997) Vol. 36, No. 4, pp. 508-515. CODEN: JBMRBG. ISSN: 0021-9304.
COUNTRY:	JAPAN
DOCUMENT TYPE:	Journal
FILE SEGMENT:	CAPLUS
OTHER SOURCE:	CAPLUS 1997:588729
LANGUAGE:	English
ENTRY DATE:	Entered STN: 20011116 Last Updated on STN: 20020618

ED Entered STN: 20011116
Last Updated on STN: 20020618

AB ω-Methacryloyloxyalkyl phosphorylcholine (MAPC) polymers which were synthesized with attention to the surface structure of a biomembrane show excellent blood compatibility, i.e., resistance to protein adsorption and blood cell adhesion. To clarify the stability of platelets in contact with the MAPC polymer surfaces, cytoplasmic free calcium concentration ([Ca2+]i)

in the platelets was measured. A platelet suspension was passed through a column packed with various polymer beads after treatment with plasma, and the [Ca2+]i in the platelets eluted from the column was measured. The [Ca2+]i in contact with the MAPC polymers, i.e., poly[2-methacryloyloxyethyl phosphorylcholine-co-Bu methacrylate (BMA)] (PMEB) and poly(6-methacryloyloxyhexyl phosphorylcholine-co-BMA) (PMHB), was less than that in contact with poly(BMA). However, poly(10-methacryloyloxydecyl phosphorylcholine-co-BMA) (PMDB) was not effective in suppressing the increase in [Ca2+]i, and thus was at the same level as in the poly(BMA). Platelets in contact with PMEB or PMHB were less activated compared with those in contact with PMDB and poly(BMA). The state of the platelets adhered to these polymer surfaces, both morphol. and **immunol.**, was examined SEM observation of the polymer surface after contact with a platelet suspension revealed that many platelets adhered and changed their shape on the poly(BMA). The nos. of adherent platelets were reduced on all MAPC polymer surface. The relative amount of α-granule membrane glycoprotein (GMP-140) which appears on the cell membrane by activation of platelets on the PMEB surfaces was less than that on poly(BMA) and poly(2-hydroxyethyl methacrylate). Thus, PMEB and PMHB suppressed not only platelet adhesion but also activation of the platelets in contact with these surfaces.

CC 63-7
ST Miscellaneous Descriptors
phospholipid polymer surface platelet activation
RN **125275-25-4; 158760-97-5**

L82 ANSWER 55 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:183031 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA12512150849X
TITLE: Preparation of self-assembled biomimetic membranes and their functions
AUTHOR(S): Nakabayashi, Nobuo
CORPORATE SOURCE: Institute Medical and Dental Engineering, Tokyo Medical and Dental University, Tokyo, 101, Japan.
SOURCE: Advanced Biomaterials in Biomedical Engineering and Drug Delivery Systems, [Iketani Conference on Biomedical Polymers], 5th, Kagoshima, Japan, Apr. 18-22, 1995, (1996) pp. 193-197.
CODEN: 63CXA6.
COUNTRY: JAPAN
DOCUMENT TYPE: Conference
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1996:470886
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020730

ED Entered STN: 20011116
Last Updated on STN: 20020730

AB A review, with 18 refs. New hypothesis to prepare nonthrombogenic materials has been proposed and the supporting evidence was discussed. That was a surface which could adsorb phospholipids, would be biocompatible and a methacrylate having affinity with phospholipids was designed. 2-Methacryloyloxyethyl phosphorylcholine (MPC) was prepared, copolymd. with several monomers and their evaluation was carried out. It was found that polymers having phosphorylcholine groups, phospholipid polymers, have good affinity with phospholipids and could adsorb them on the surface. Liposomal structure was kept when the phospholipid polymers were soaked in liposomal solution The structure was identified by XPS, comparison of the gel-liquid crystalline transition temperature of phospholipid liposome with

differential scanning calorimetry, and desorption of phospholipids. Data suggested that self-assembled biomimetic membrane was prepared on the MPC copolymers. Their unusual but interesting property was inhibition of protein adsorption even in plasma solution and blood. They did not adsorb and activate platelets. Preparation of dialysis membranes which do not require **anticoagulants** is also possible. So it was concluded that MPC copolymers are promising basic biocompatible biomaterials.

CC 63-0
ST Miscellaneous Descriptors
review methacryloyloxyethyl phosphorylcholine membrane biomaterial
RN **67881-98-5Q (2-Methacryloyloxyethyl phosphorylcholine, copolymers)**

L82 ANSWER 56 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:121497 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA12008079736X
TITLE: Biocompatible water-soluble cellulose derivatives, their manufacture and uses
AUTHOR(S): Nakabayashi, Nobuo; Ishihara, Kazuhiko
CORPORATE SOURCE: ASSIGNEE: NOF Corp.
PATENT INFORMATION: WO 9316117 A1 19 Aug 1993
SOURCE: (1993) PCT Int. Appl., 19 pp.
CODEN: PIXXD2.
COUNTRY: JAPAN
DOCUMENT TYPE: Patent
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1994:79736
LANGUAGE: Japanese
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020917
ED Entered STN: 20011116
Last Updated on STN: 20020917
AB The title cellulose derivs. are manufactured by grafting a water-soluble cellulose
substrate with 2-methacryloyloxyethylphosphorylcholine (I), and are useful for dialysis membranes for purification of blood, etc. Thus, acetylating a cellulose powder with H2SO4-catalyzed Ac2O in AcOH, and deacetylating the derivative with aqueous Na2CO3 and NaOH gave a water-soluble cellulose (II) which
was then purified using membrane to remove low mol. weight products. Mixing 10 mL 0.5% aqueous solution of the purified II with 0.17 g ammonium Ce nitrate, 3
mL 0.1N HNO3, then with 1.2 g I, and stirring under Ar for 1 h at 40° gave a grafted product (III) bearing 11.3% groups derived from I, and having mol. weight (polyethylene glycol-conversion, GPC-method-based) 1.4 + 105. Passing an aqueous solution of the III through viscose-derived hollow-fibers gave treated fibers bearing the III 8.6 μg/cm2; a dialysis module formed from the fibers showed low adhesion of platelets during purification of blood specimens.
CC 43-3
ST Miscellaneous Descriptors
anticoagulant cellulose methacryloyloxyethylphosphorylcholine graft manuf; dialysis membrane **anticoagulant** treatment
cellulose graft
RN **142146-61-0**

L82 ANSWER 57 OF 70 TOXCENTER COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:121480 TOXCENTER
COPYRIGHT: Copyright 2005 ACS
DOCUMENT NUMBER: CA12008078993S

TITLE: Biocompatible supported membranes useful for dialyzers, etc.
AUTHOR(S): Kamo, Jun; Nakabayashi, Norio; Ishihara, Kazuhiko
CORPORATE SOURCE: ASSIGNEE: Nakabayashi Norio
PATENT INFORMATION: JP 93177119 A2 20 Jul 1993
SOURCE: (1993) Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF.
COUNTRY: JAPAN
DOCUMENT TYPE: Patent
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1994:78993
LANGUAGE: Japanese
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20020917
ED Entered STN: 20011116
Last Updated on STN: 20020917
AB The title microporous membranes are derived from hydrophobic copolymers of (aliphatic hydrocarboxy)alkyl methacrylates and 2-methacryloyloxyethyl phosphorylcholine (I). Thus, impregnation of a polyethylene hollow-fiber membrane (having pore volume 71 vol%; as support) with a 0.7% MeOH-THF 1:1 solution of a I (31.0 mol%)-Bu methacrylate copolymer (II; mol. weight 38,000) for 5 min gave a biocompatible, functionalized membrane with II content 6.3% which showed adhesion of blood platelets 8.0% in a dialysis **assay**, vs. 39.5% for a supported Bu methacrylate homopolymer in place of the II.
CC 38-3
ST Miscellaneous Descriptors
membrane antithrombotic methacrylate phosphorylcholine ester copolymer; biocompatible membrane methacrylate phosphorylcholine ester copolymer; dialyzer membrane methacryloyloxyethyl phosphorylcholine copolymer biocompatible; prosthetic methacryloyloxyethyl phosphorylcholine copolymer biocompatible; ammonium phosphate inner salt polymer biocompatible
RN **125275-25-4** (n-Butyl methacrylate-2-methacryloyloxyethyl phosphorylcholine copolymer)
RN **134980-16-8**; **134980-17-9**

L82 ANSWER 58 OF 70 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 2002098928 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11829441
TITLE: The vascular prosthesis without pseudointima prepared by antithrombogenic phospholipid polymer.
AUTHOR: Yoneyama Toshikazu; Sugihara Ken-ichi; Ishihara Kazuhiko; Iwasaki Yasuhiko; Nakabayashi Nobuo
CORPORATE SOURCE: The Second Department of Surgery, School of Medicine, Tokyo Medical and Dental University, Japan.
SOURCE: Biomaterials, (2002 Mar) 23 (6) 1455-9.
Journal code: 8100316. ISSN: 0142-9612.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200207
ENTRY DATE: Entered STN: 20020207
Last Updated on STN: 20020730
Entered Medline: 20020729
ED Entered STN: 20020207
Last Updated on STN: 20020730
Entered Medline: 20020729
AB On the luminal surface of the common synthetic vascular prostheses, blood

coagulation can occur and a thrombus membrane is formed when blood flow passes through it. The thrombus membrane should be organized according to the wound healing process and it becomes a pseudointima which could serve as a blood conduit. However, the small-diameter vascular prosthesis may be quickly occluded by the initial thrombus. Therefore, no clinically applicable small-diameter prostheses have been developed to date. 2-Methacrylovloxyethyl phosphoryleholine (MPC) polymers resemble the structure of an outer cell membrane similar to the fluid mosaic model and demonstrate excellent antithrombogenicity. The purpose of this study is to develop a clinically applicable small-diameter prosthesis based on the new concept of the MPC polymer. We prepared vascular prostheses (2mm ID) from polymer blend composed of segmented polyurethane and the MPC polymer. The prostheses were placed in rabbit carotid arteries. The luminal surface retrieved at eight weeks after implantation was clear without thrombus and pseudointima. We now realize that the vascular prosthesis having the MPC polymer can be applied as a small-diameter prosthesis because it functions without thrombus and pseudointima formation.

CT Animals
Arteries: PA, pathology
*Biocompatible Materials
*Methacrylates: CH, chemistry
Microscopy, Electron, Scanning
*Phosphorylcholine: AA, analogs & derivatives
*Phosphorylcholine: CH, chemistry
*Polymers: CH, chemistry
Rabbits
Time Factors
*Tunica Intima: CH, chemistry
Tunica Intima: UL, ultrastructure

RN 107-73-3 (Phosphorylcholine); **67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)**

CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Polymers)

L82 ANSWER 59 OF 70 MEDLINE on STN
ACCESSION NUMBER: 2005301982 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15948416
TITLE: Effects of surface modification of intraocular lenses on foreign body reaction.
AUTHOR: Okajima Yasuhiko; Saika Shizuya; Sawa Mitsuru
CORPORATE SOURCE: Department of Ophthalmology, Nihon University School of Medicine, Japan.
SOURCE: Nippon Ganka Gakkai zasshi, (2005 May) 109 (5) 267-73. Journal code: 7505716. ISSN: 0029-0203.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Japanese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507
ENTRY DATE: Entered STN: 20050614
Last Updated on STN: 20050731
Entered Medline: 20050729

ED Entered STN: 20050614
Last Updated on STN: 20050731
Entered Medline: 20050729

AB PURPOSE: In order to improve biocompatibility, we investigated the effects of surface modification by 2-methacryloyloxyethyl phosphorylcholine (MPC) on the foreign body reaction of intraocular lens (IOLs). MATERIALS AND METHODS: Materials of the IOLs were polymethylmethacrylate, hydrophobic acryl, and MPC surface-modified hydrophobic IOLs (MPC modified acryl). In an in vitro study, cultured macrophages sampled from mouse intra-abdominal

exudate were cultured on a plate for each IOL material. The cell density and morphology of attached cells on the IOL materials were investigated. In an in vivo study, each IOL material was implanted in the peritoneal space of mice and foreign body reaction was investigated with a light microscope and a scanning electron microscope. RESULTS: In the in vitro study, the cells on the MPC modified acryl IOL material were remarkably fewer than those on the plates of the other two IOL materials. Regarding the implanted IOL matrevials, MPC modified acryl IOL material showed more polynuclear giant foreign body cells in the early period than the other two IOL materials. CONCLUSION: MPC surface modification can reduce the foreign body reaction of IOLs and has the potential to improve biocompatibility of IOL materials.

CT Check Tags: Male
Animals
Cell Adhesion
Cells, Cultured
*Coated Materials, Biocompatible
English Abstract
*Foreign-Body Reaction
*Lenses, Intraocular
***Macrophages, Peritoneal: IM, immunology**
Macrophages, Peritoneal: PA, pathology
*Methacrylates
Mice
Mice, Inbred C57BL
*Phosphorylcholine
*Phosphorylcholine: AA, analogs & derivatives

RN 107-73-3 (Phosphorylcholine); **67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)**

CN 0 (Coated Materials, Biocompatible); 0 (Methacrylates)

L82 ANSWER 60 OF 70 MEDLINE on STN
ACCESSION NUMBER: 2002392253 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12072015
TITLE: Beneficial effects of synthetic phospholipid polymer, poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate), on stratum corneum function.
AUTHOR: Kanekura T; Nagata Y; Miyoshi H; Ishihara K; Nakabayashi N; Kanzaki T
CORPORATE SOURCE: Department of Dermatology, Kagoshima University Faculty of Medicine, Japan.. takurok@m2.kufm.kagoshima-u.ac.jp
SOURCE: Clinical and experimental dermatology, (2002 May) 27 (3) 230-4.
Journal code: 7606847. ISSN: 0307-6938.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200209
ENTRY DATE: Entered STN: 20020727
Last Updated on STN: 20020911
Entered Medline: 20020910

ED Entered STN: 20020727
Last Updated on STN: 20020911
Entered Medline: 20020910

AB The effects of a newly synthesized phospholipid polymer, poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate) [poly(MPC-co-BMA)], on the water barrier function and water-holding capacity of the stratum corneum were examined by measuring transepidermal water loss (TEWL) and electrical conductance of the skin surface. On the

backs of four NC mice, the epidermal permeability barrier was abrogated by cellophane tape stripping 30 times. The skin was then treated with 0.1% poly(MPC-co-BMA) or distilled water twice daily for the following 3 days. Poly(MPC-co-BMA) reduced TEWL significantly compared with the control after the first treatment (P = 0.044) and this effect was observed for 3 days. In human skin, water-holding capacity was measured at 5, 10, 15, 30 min and 1, 2, and 4 h after the application of poly(MPC-co-BMA) or distilled water to both volar forearms of 21 healthy volunteers. Skin treated with poly(MPC-co-BMA) showed significantly greater ability to retain water at all time points. Poly(MPC-co-BMA) is the first synthetic material that can enhance both the water barrier function and water-holding capacity of the stratum corneum. Our results indicate that this substance may be useful clinically in the treatment of dry skin.

CT Check Tags: Female; Male
Adult
Animals
Dose-Response Relationship, Drug
*Epidermis: DE, drug effects
Epidermis: ME, metabolism
Galvanic Skin Response: DE, drug effects
Humans
*Methacrylates: PD, pharmacology
Mice
Middle Aged
Patch Tests
*Phosphorylcholine: AA, analogs & derivatives
Phosphorylcholine: IM, immunology
*Phosphorylcholine: PD, pharmacology
Water: ME, metabolism
*Water Loss, Insensible: DE, drug effects

RN 107-73-3 (Phosphorylcholine); **125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))**; 7732-18-5 (Water)

CN 0 (Methacrylates)

L82 ANSWER 61 OF 70 MEDLINE on STN

ACCESSION NUMBER: 2001018842 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10898238
TITLE: New polymeric biomaterials-phospholipid polymers with a biocompatible surface.
AUTHOR: Ishihara K
CORPORATE SOURCE: Department of Materials Science, Graduate School of Engineering, The University of Tokyo, Japan.
SOURCE: Frontiers of medical and biological engineering : international journal of the Japan Society of Medical Electronics and Biological Engineering, (2000) 10 (2) 83-95.
Journal code: 9011464. ISSN: 0921-3775.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001109

ED Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001109

AB New biomedical polymers were designed with attention to the surface of

biological membranes, i.e. the surface was completely covered with phospholipid polar groups. The polymers with a phosphorylcholine group, 2-methacryloyloxyethyl phosphorylcholine (MPC) co-polymerized with hydrophobic alkyl group, could interact with phospholipids in plasma selectively and strongly. The adsorbed phospholipids on the polymer surface were concentrated, organized each other and then formed a self-assembled biomimetic membrane surface. The surface showed excellent resistance for both protein adsorption and blood cell adhesion, i.e. the MPC polymer showed good blood compatibility. Based on these characteristics of the MPC polymer, it was applied to improve the biocompatibility and biostability of an implantable glucose sensor. The relative output current of the sensor covered with the MPC polymer membrane was maintained as the initial level even after 14 days of subcutaneous implantation in a rat. Therefore, it is concluded that the MPC polymer membrane is an excellent material for implantable biomedical devices.

CT Adsorption
Animals
*Biocompatible Materials: CH, chemistry
Biosensing Techniques
***Blood Coagulation**
Cell Adhesion
Glucose: AN, analysis
Humans
Membranes, Artificial
Methacrylates: CS, chemical synthesis
*Methacrylates: CH, chemistry
Microspheres
*Phosphorylcholine: AA, analogs & derivatives
Phosphorylcholine: CS, chemical synthesis
Phosphorylcholine: CH, chemistry
Proteins: CH, chemistry
Rats
Research Support, Non-U.S. Gov't
Surface Properties

RN 107-73-3 (Phosphorylcholine); **125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))**; 50-99-7 (Glucose)

CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Proteins)

L82 ANSWER 62 OF 70 MEDLINE on STN
ACCESSION NUMBER: 95130614 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7829565
TITLE: Selective adhesion of platelets on a polyion complex composed of phospholipid polymers containing sulfonate groups and quarternary ammonium groups.
AUTHOR: Ishihara K; Inoue H; Kurita K; Nakabayashi N
CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
SOURCE: Journal of biomedical materials research, (1994 Nov) 28 (11) 1347-55.
Journal code: 0112726. ISSN: 0021-9304.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199502
ENTRY DATE: Entered STN: 19950307
Last Updated on STN: 19950307
Entered Medline: 19950223

ED Entered STN: 19950307
Last Updated on STN: 19950307
Entered Medline: 19950223

AB We investigated the effects of electrical charges on cell-polymer interactions of poly[2-methacryloyloxyethyl phosphorylcholine(MPC)-co-n-butyl methacrylate (BMA)] (PMB) having excellent blood compatibility, by copolymerizing anionic or cationic methacrylates with MPC and BMA. A polyion complex (PIC) composed of anionic and cationic MPC copolymers was also prepared. When the cell adhesion on these polymer surfaces from rabbit whole blood was evaluated, we observed a considerable reduction in cell adhesion on the MPC copolymers compared with that on poly(BMA), even when the MPC copolymer was electrically charged. On the other hand, many platelets selectively adhered to the PIC surface from whole blood, but the adherent platelets maintained a discoid shape. The amount of adenosine triphosphate (ATP) in platelets adherent on the PMB or the PIC from a platelet-rich plasma (PRP) was more than 75% of that in the original PRP, which indicated that the activity of these platelets remained high. However, in the platelets adherent to poly(BMA), only a small amount of ATP remained. Protein adsorption on the polymer surface from human plasma was investigated using a gold-colloid-labeled **immunoassay** against albumin gamma-globulin, and fibrinogen. Many of these proteins adsorbed on poly(BMA), whereas a small amount of protein was observed on the MPC copolymers that had an electrical charge. Albumin adsorption and suppression of gamma-globulin and fibrinogen adsorption were found on the PIC. Therefore, the introduction of electrical charges in the PMB did not have an adverse effect on cell adhesion and protein adsorption.(ABSTRACT TRUNCATED AT 250 WORDS)

CT Adenosine Triphosphate: ME, metabolism
Adsorption
Animals
Blood Platelets: ME, metabolism
Blood Platelets: PH, physiology
*Materials Testing
*Methacrylates
Microscopy, Electron, Scanning
*Phosphorylcholine: AA, analogs & derivatives
*Platelet Adhesiveness
*Polymers: CS, chemical synthesis
Polymers: CH, chemistry
*Proteins: PK, pharmacokinetics
Rabbits
Research Support, Non-U.S. Gov't

RN 107-73-3 (Phosphorylcholine); 56-65-5 (Adenosine Triphosphate); **67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)**

CN 0 (Methacrylates); 0 (Polymers); 0 (Proteins); 0 (butyl methacrylate)

L82 ANSWER 63 OF 70 MEDLINE on STN
ACCESSION NUMBER: 95085403 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7993191
TITLE: Improvement of hemocompatibility on a cellulose dialysis membrane with a novel biomedical polymer having a phospholipid polar group.
AUTHOR: Ishihara K; Fukumoto K; Miyazaki H; Nakabayashi N
CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
SOURCE: Artificial organs, (1994 Aug) 18 (8) 559-64.
Journal code: 7802778. ISSN: 0160-564X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199501
ENTRY DATE: Entered STN: 19950124
Last Updated on STN: 19980206
Entered Medline: 19950106

ED Entered STN: 19950124
Last Updated on STN: 19980206
Entered Medline: 19950106

AB To improve surface hemocompatibility on cellulose hollow fibers for hemodialysis, newly designed hemocompatible polymers with a phospholipid polar group, 2-methacryloyloxyethyl phosphorylcholine (MPC) polymers, were introduced on the surface through two different methods: direct grafting of MPC on the surface, or coating of a water-soluble cellulose grafted with MPC. The MPC was polymerized using cerium ion as an initiator in the cellulose hollow fibers, and the poly(MPC) chains were grafted directly on the surface. Another modification of the cellulose hollow fibers was attempted by coating them with a water-soluble graft copolymer composed of a poly(MPC) side chain and a cellulose backbone. The coating process from an aqueous solution of the graft copolymer was very convenient, and the graft copolymer on the surface was not detached even after water circulated into the hollow fibers. These cellulose hollow fibers modified with MPC polymers displayed excellent hemocompatibility such as prevention of blood cell adhesion and aggregation after contact with blood without an **anticoagulant.** The permeability of the hollow fibers did not decrease as a result of these modifications. From these results, it is clearly suggested that introduction of the MPC units was effective for improving the hemocompatibility of the hollow fibers for hemodialysis.

CT Animals
*Biocompatible Materials
*Blood Physiology
*Cellulose
Humans
Materials Testing
Membranes, Artificial
*Methacrylates
*Phosphorylcholine: AA, analogs & derivatives
Platelet Adhesiveness
Platelet Aggregation
Polymers
Rabbits
*Renal Dialysis: IS, instrumentation
Renal Dialysis: MT, methods
Research Support, Non-U.S. Gov't
Solubility
Surface Properties

RN 107-73-3 (Phosphorylcholine); **67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)**; 9004-34-6 (Cellulose)

CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Polymers)

L82 ANSWER 64 OF 70 MEDLINE on STN

ACCESSION NUMBER: 95197310 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7890439
TITLE: Polymeric biomaterials: influence of phosphorylcholine polar groups on protein adsorption and complement activation.
AUTHOR: Yu J; Lamba N M; Courtney J M; Whateley T L; Gaylor J D; Lowe G D; Ishihara K; Nakabayashi N
CORPORATE SOURCE: Bioengineering Unit, University of Strathclyde, Glasgow, UK.
SOURCE: International journal of artificial organs, (1994 Sep) 17

(9) 499-504.
Journal code: 7802649. ISSN: 0391-3988.
PUB. COUNTRY: Italy
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199504
ENTRY DATE: Entered STN: 19950427
Last Updated on STN: 19950427
Entered Medline: 19950418

ED Entered STN: 19950427
Last Updated on STN: 19950427
Entered Medline: 19950418

AB The introduction to polymeric biomaterials of phosphorylcholine polar groups represents an approach towards the development of materials with improved blood compatibility. In this respect, two biomaterials, one a copolymer of butyl methacrylate and 2-methacryloyloxyethylphosphorylcholin e (MPC), (poly(BMA-co-MPC) and the other, MPC-grafted Cuprophan, were examined with respect to their influence on protein adsorption and complement activation. Protein adsorption was studied by measurement of the adsorption of radiolabelled single proteins (albumin and fibrinogen), while complement activation was measured using **radioimmunoassay** for C3a des Arg. The investigation demonstrated that the polymers containing phosphorylcholine polar groups can achieve a marked reduction in protein adsorption and complement activation and supports the utilization of phosphorylcholine polar groups as a means of improving the compatibility of biomaterials for blood-contacting applications.

CT Adsorption: DE, drug effects
Albumins: DE, drug effects
*Albumins: ME, metabolism
*Biocompatible Materials: CH, chemistry
Biocompatible Materials: PD, pharmacology
Cellulose: AA, analogs & derivatives
Cellulose: CH, chemistry
Complement 3a: ME, metabolism
*Complement Activation: DE, drug effects
Fibrinogen: DE, drug effects
*Fibrinogen: ME, metabolism
Humans
Membranes, Artificial
Methacrylates: CH, chemistry
Phosphorylcholine: AA, analogs & derivatives
Phosphorylcholine: CH, chemistry
*Phosphorylcholine: PD, pharmacology
Polymers

RN 107-73-3 (Phosphorylcholine); **67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)**; 80295-42-7 (Complement 3a); 9001-32-5 (Fibrinogen); 9004-34-6 (Cellulose); 9050-09-3 (cuprammonium cellulose)

CN 0 (Albumins); 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Polymers); 0 (butyl methacrylate)

L82 ANSWER 65 OF 70 MEDLINE on STN
ACCESSION NUMBER: 94266935 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8207035
TITLE: Hemocompatibility on graft copolymers composed of poly(2-methacryloyloxyethyl phosphorylcholine) side chain and poly(n-butyl methacrylate) backbone.
AUTHOR: Ishihara K; Tsuji T; Kurosaki T; Nakabayashi N
CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.

SOURCE: Journal of biomedical materials research, (1994 Feb) 28 (2) 225-32.
Journal code: 0112726. ISSN: 0021-9304.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940721
Last Updated on STN: 19940721
Entered Medline: 19940712

ED Entered STN: 19940721
Last Updated on STN: 19940721
Entered Medline: 19940712

AB To improve the hemocompatibility on hydrophobic biomedical materials by a simple coating technique, graft copolymers composed of a hydrophilic side chain with phospholipid polar groups and a hydrophobic backbone were synthesized. The hydrophilic chain had phospholipid polar groups, poly[2-methacryloyloxyethyl phosphorylcholine (MPC)], and the hydrophobic backbone was poly[n-butyl methacrylate (BMA)]. Because the graft copolymers obtained could dissolve in ethanol, they could be used as a coating material. When the poly(MPC-graft-BMA) was coated onto a poly(BMA) membrane, the composition of the MPC units on the surface was maintained in the bulk graft copolymer even after immersion in water. Protein adsorption on the membrane coated with the graft copolymer from human plasma detected by a gold-colloid labeled **immunoassay** was drastically decreased compared with that on glass and the original membrane. Moreover, blood cell adhesion, activation, and aggregation on the membrane after contact with human citrated whole blood were suppressed by the coating of the graft copolymer. These results clearly show that the poly(MPC-graft-BMA) is a suitable material for improving hemocompatibility on the biomedical devices because of its protein adsorption and cell adhesion resistant properties.

CT Adsorption
Blood Proteins: PK, pharmacokinetics
Cell Adhesion
Erythrocytes: PH, physiology
Humans
*Materials Testing
Methacrylates: CS, chemical synthesis
*Methacrylates: ST, standards
Microscopy, Electron, Scanning
*Phosphorylcholine: AA, analogs & derivatives
Phosphorylcholine: CS, chemical synthesis
Phosphorylcholine: ST, standards
Research Support, Non-U.S. Gov't

RN 107-73-3 (Phosphorylcholine); **125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))**

CN 0 (Blood Proteins); 0 (Methacrylates)

L82 ANSWER 66 OF 70 MEDLINE on STN
ACCESSION NUMBER: 94064695 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8245045
TITLE: Effects of phospholipid adsorption on nonthrombogenicity of polymer with phospholipid polar group.
AUTHOR: Ishihara K; Oshida H; Endo Y; Watanabe A; Ueda T; Nakabayashi N
CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
SOURCE: Journal of biomedical materials research, (1993 Oct) 27

(10) 1309-14.
Journal code: 0112726. ISSN: 0021-9304.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199312
ENTRY DATE: Entered STN: 19940201
Last Updated on STN: 19950206
Entered Medline: 19931223
ED Entered STN: 19940201
Last Updated on STN: 19950206
Entered Medline: 19931223
AB Polymers with phospholipid polar groups, 2-methacryloyloxyethyl phosphorylcholine (MPC) polymers, have excellent nonthrombogenic properties. The effects of adsorption of phospholipids on platelet adhesion and activation on the MPC copolymer with n-butyl methacrylate (BMA) were investigated with particular attention to the structure of the phospholipids adsorbed onto the polymer surface. The electrical nature of the phospholipids adsorbed on the polymer surface affected the thrombogenicity of the polymer. On the MPC polymer surface treated with an aqueous liposomal solution of acidic phospholipids, phosphatidylserine, platelet adhesion and activation occurred to a greater extent when compared to a poly(MPC-co-BMA) surface. However, on the MPC polymer surface treated with electrically neutral phosphatidylcholines, reduced thrombogenicity could be observed. Therefore, the adsorption of the phosphatidylcholines was an important factor in reducing the thrombogenicity on the polymers. Moreover, by comparison of the poly(MPC-co-BMA) to a poly(BMA), platelet adhesion and activation on these polymer surfaces depended on the adsorption state of the phosphatidylcholines. The amount of phosphatidylcholine adsorbed on the poly(MPC-co-BMA) increased with an increase in the MPC mole fraction of the copolymer. This indicates that the MPC moieties have affinity for the phosphatidylcholines. We conclude that the poly(MPC-co-BMA) can adsorb large amounts of phosphatidylcholines and that these phospholipids organize themselves. The organized adsorption layer of the phosphatidylcholines on the surface, which construct biomembrane-like surfaces, can reduce platelet adhesion and activation effectively.
CT 1,2-Dipalmitoylphosphatidylcholine
Adsorption
Animals
*Biocompatible Materials
Blood Coagulation
Liposomes
*Methacrylates
Microscopy, Electron, Scanning
*Phospholipids
*Phosphorylcholine: AA, analogs & derivatives
*Platelet Activation
*Platelet Adhesiveness
Rabbits
Research Support, Non-U.S. Gov't
RN 107-73-3 (Phosphorylcholine); **125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))**; 2644-64-6 (1,2-Dipalmitoylphosphatidylcholine)
CN 0 (Biocompatible Materials); 0 (Liposomes); 0 (Methacrylates); 0 (Phospholipids)

L82 ANSWER 67 OF 70 MEDLINE on STN
ACCESSION NUMBER: 93131994 MEDLINE

DOCUMENT NUMBER: PubMed ID: 1484061
TITLE: Hemocompatibility of human whole blood on polymers with a phospholipid polar group and its mechanism.
AUTHOR: Ishihara K; Oshida H; Endo Y; Ueda T; Watanabe A; Nakabayashi N
CORPORATE SOURCE: Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan.
SOURCE: Journal of biomedical materials research, (1992 Dec) 26 (12) 1543-52.
Journal code: 0112726. ISSN: 0021-9304.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199302
ENTRY DATE: Entered STN: 19930226
Last Updated on STN: 19980206
Entered Medline: 19930218

ED Entered STN: 19930226
Last Updated on STN: 19980206
Entered Medline: 19930218

AB The hemocompatibility of a polymer containing a phospholipid polar group, poly(2-methacryloyloxyethyl phosphorylcholine (MPC)-co-n-butyl methacrylate(BMA)), with human whole blood was evaluated. When human whole blood without an **anticoagulant** was contacted with polymers, the blood cell adhesion and aggregation on the polymer without the MPC moiety was extensive, and considerable fibrin deposition was observed. This phenomenon was suppressed with an increase in the polymer MPC composition. Thus, the MPC moiety in the copolymer plays an important role in the nonthrombogenic behavior of the copolymer. These results were also confirmed by the whole blood **coagulation** time on the polymer surface which was determined by Lee-White method. The adsorption of phospholipids and proteins from human plasma on poly(MPC-co-BMA) was investigated to clarify the mechanism of the nonthrombogenicity observed with the polymer. The amount of phospholipids was increased; whereas, adsorbed proteins were decreased with an increase in the MPC composition. From these results, we concluded that the phospholipids adsorbed on poly(MPC-co-BMA) play the most important role in the nonthrombogenicity of the MPC copolymer.

CT Check Tags: In Vitro
Adsorption
*Biocompatible Materials: CH, chemistry
Blood Coagulation
*Blood Physiology
Humans
*Methacrylates: CH, chemistry
Methacrylates: ME, metabolism
Microscopy, Electron, Scanning
Microspheres
*Phospholipids: CH, chemistry
*Phosphorylcholine: AA, analogs & derivatives
Phosphorylcholine: CH, chemistry
Phosphorylcholine: ME, metabolism
Polyhydroxyethyl Methacrylate: AN, analysis
*Polymers: CH, chemistry
Research Support, Non-U.S. Gov't
Thrombosis: BL, blood

RN 107-73-3 (Phosphorylcholine); **125275-25-4 (poly(2-methacryloyloxyethyl phosphorylcholine-co-n-butyl methacrylate))**; 25249-16-5 (Polyhydroxyethyl Methacrylate)

CN 0 (Biocompatible Materials); 0 (Methacrylates); 0 (Phospholipids); 0 (Polymers)

L82 ANSWER 68 OF 70 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:317261 BIOSIS
DOCUMENT NUMBER: PREV200510103200
TITLE: Novel biocompatible phosphorylcholine-based self-assembled nanoparticles for drug delivery.
AUTHOR(S): Salvage, Jonathan P.; Rose, Susanna F.; Phillips, Gary J.; Hanlon, Geoffrey W.; Lloyd, Andrew W. [Reprint Author]; Ma, Iris Y.; Armes, Stephen P.; Billingham, Norman C.; Lewis, Andrew L.
CORPORATE SOURCE: Univ Brighton, Sch Pharm and Biomol Sci, Biomed Mat Res Grp, Moulsecoomb, Brighton BN2 4GJ, E Sussex, UK a.w.lloyd@brighton.ac.uk
SOURCE: Journal of Controlled Release, (MAY 18 2005) Vol. 104, No. 2, pp. 259-270.
CODEN: JCREEC. ISSN: 0168-3659.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Aug 2005
Last Updated on STN: 17 Aug 2005

ED Entered STN: 17 Aug 2005
Last Updated on STN: 17 Aug 2005

AB Major challenges associated with nano-sized drug delivery systems include removal from systemic circulation by phagocytic cells and controlling appropriate drug release at target sites. 2-methacryloyloxyethyl phosphorylcholine (MPC) has been copolymerised in turn with two pH responsive comonomers (2-(diethylamino)ethyl methacrylate (DEA) and 2-(diisopropylamino)ethyl methacrylate (DPA), to develop novel biocompatible drug delivery vehicles. Micelles were prepared from a series of copolymers with varying block compositions and their colloidal stability and dimensions were assessed over a range of solution pH using photon correlation spectroscopy. The drug loading capacities of these micelles were evaluated using Orange OT dye as a model compound. The cytotoxicity of the micelles was assessed using an in vitro **assay**. The MPC-DEA diblock copolymers formed micelles at around pH 8 and longer DEA block lengths allowed higher drug loadings. However, these micelles were not stable at physiological pH. In contrast, MPC-DPA diblock copolymers formed micelles of circa 30 nm diameter at physiological pH. In vitro **assays** indicated that these MPC-DPA diblock copolymers had negligible cytotoxicities. Thus novel non-toxic biocompatible micelles of appropriate size and good colloidal stability with pH-modulated dug uptake and release can be readily produced using MPC-DPA diblock copolymers. (c) 2005 Elsevier B.V All rights reserved.

CC Biophysics - Bioengineering 10511

IT Major Concepts
Methods and Techniques; Biomaterials

IT Chemicals & Biochemicals
2-methacryloyloxyethyl phosphorylcholine; 2-(diethylamino)ethyl methacrylate; 2-(diisopropylamino)ethyl methacrylate

IT Methods & Equipment
photon correlation spectroscopy: laboratory techniques, spectrum analysis techniques; phosphorylcholine-based self-assembled nanoparticle: drug delivery device

IT Miscellaneous Descriptors
drug delivery; pH-responsive

RN **67881-98-5** (2-methacryloyloxyethyl phosphorylcholine)
105-16-8 (2-(diethylamino)ethyl methacrylate)

L82 ANSWER 69 OF 70 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:70886 BIOSIS
DOCUMENT NUMBER: PREV200500069303
TITLE: A novel methodology for pre-screening anti-thrombogenicity of artificial organs under physiologically identical pulsatile environments.
AUTHOR(S): Iwasaki, K.; Takeuchi, Y.; Saeki, W.; Umezu, M.; Ishihara, K.; Imachi, K.
SOURCE: International Journal of Artificial Organs, (July 2004) Vol. 27, No. 7, pp. 567. print.
Meeting Info.: 31st Annual Congress of the European Society for Artificial Organs (ESAO). Warsaw, Poland. September 08-11, 2004. European Society for Artificial Organs.
CODEN: IJAODS. ISSN: 0391-3988.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Feb 2005
Last Updated on STN: 16 Feb 2005
ED Entered STN: 16 Feb 2005
Last Updated on STN: 16 Feb 2005
CC General biology - Symposia, transactions and proceedings 00520
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Bioengineering 10511
Cardiovascular system - Physiology and biochemistry 14504
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Immunology - General and methods 34502
IT Major Concepts
Biomaterials; Cardiovascular System (Transport and Circulation)
IT Parts, Structures, & Systems of Organisms
aorta: circulatory system; atrium: circulatory system; platelet: blood and lymphatics
IT Chemicals & Biochemicals
2-methacryloyloxyethyl phosphorylcholine; IgG [**immunoglobulin** G]; albumin; fibrinogen; polyurethane
IT Methods & Equipment
gold colloid labeling **immunoassay**: laboratory techniques; ventricular assist device: prosthetic
RN **67881-98-5** (2-methacryloyloxyethyl phosphorylcholine)

L82 ANSWER 70 OF 70 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:113997 BIOSIS
DOCUMENT NUMBER: PREV200000113997
TITLE: Chemical modification of silk fibroin with 2-methacryloyloxyethyl phosphorylcholine. II. Graft-polymerization onto fabric through 2-methacryloyloxyethyl isocyanate and interaction between fabric and platelets.
AUTHOR(S): Furuzono, T.; Ishihara, K.; Nakabayashi, N.; Tamada, Y. [Reprint author]
CORPORATE SOURCE: National Institute of Sericultural and Entomological Science, 2-1 Owashi, Tsukuba, Ibaraki, 305-8634, Japan
SOURCE: Biomaterials, (Feb., 2000) Vol. 21, No. 4, pp. 327-333. print.
CODEN: BIMADU. ISSN: 0142-9612.
DOCUMENT TYPE: Article

LANGUAGE: English
ENTRY DATE: Entered STN: 29 Mar 2000
Last Updated on STN: 3 Jan 2002
ED Entered STN: 29 Mar 2000
Last Updated on STN: 3 Jan 2002
AB 2-Methacryloyloxyethyl phosphorylcholine (MPC) was grafted onto silk fabric in a two-step heterogeneous system through the vinyl bonds of 2-methacryloyloxyethyl isocyanate (MOI) modified on the fabric. First, habutae silk fabric was modified with the MOI monomer in anhydrous dimethyl sulfoxide using di-n-butyltin (IV) dilaurate and hydroquinone at 35degreeC. The saturated weight gain of modified MOI monomer on the fabric was 7.3 wt% versus the original silk. Second, graft polymerization with MPC onto the MOI modified silk was conducted using 2,2'-azo bis(2-(2-imidazolin-2-yl)propane dihydrochloride) (VA-044) as an azo polymerization initiator. The weight of the grafted MPC eventually gained was about 26.0 wt%. The MOI-modified and MPC-grafted silk fabrics were analyzed by Fourier transform infrared (FT-IR) spectroscopy. To confirm the improved biocompatibility of the silk fabric, platelet adhesion was preliminarily tested measuring lactate dehydrogenase. The number of platelets adhering to polyMPC-grafted silk fabric decreased by about one tenth compared to original and MOI-modified silk after 60 min of contact with human platelet-rich plasma (1.0 X 106 platelets cm-2).
CC Blood - General and methods 15001
Biochemistry methods - General 10050
Biochemistry studies - General 10060
Biophysics - General 10502
Pathology - Therapy 12512
IT Major Concepts
Biomaterials; Chemistry; Blood and Lymphatics (Transport and Circulation)
IT Chemicals & Biochemicals
2-methacryloyloxyethyl isocyanate; 2-methacryloyloxyethyl phosphorylcholine; silk fibroin
IT Methods & Equipment
platelet adhesion **assay**: analytical method
IT Miscellaneous Descriptors
chemical modification; fabric-platelet interaction; graft-polymerization; silk fabric
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 30674-80-7 (2-methacryloyloxyethyl isocyanate)
67881-98-5 (2-methacryloyloxyethyl phosphorylcholine)

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=> d his l81

     (FILE 'HCAPLUS, TOXCENTER, WPIX, MEDLINE, BIOSIS, CANCERLIT, EMBASE,
     PASCAL, JICST-EPLUS, DRUGU, BIOTECHNO, BIOTECHDS, SCISEARCH, CONF,
     CONFSCI, DISSABS' ENTERED AT 15:25:01 ON 20 SEP 2005)
L81            6 DUP REM L80 (6 DUPLICATES REMOVED)

=> d que l81
L63              QUE  ABB=ON  PLU=ON  ?ASSAY? OR ?IMMUNO? OR ?AGGLUT? OR E
                 LISA OR RIA OR ?COAG?
L76         1325 SEA SUMIDA, K?/AU
L77        17872 SEA WADA, K?/AU
L78        14175 SEA ISHIHARA, K?/AU
L79         3656 SEA (L76 OR L77 OR L78) AND L63
L80           12 SEA L79 AND WAKO/CS,SO,PA
L81            6 DUP REM L80 (6 DUPLICATES REMOVED)


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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, BIOSIS, PASCAL' - CONTINUE? (Y)/N:y



L81  ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2005:284034  HCAPLUS
DOCUMENT NUMBER:          142:332458
TITLE:                    Latex agglutination immunoassay
                          reagent for the determination of prostate specific
                          antigen
INVENTOR(S):              Sumida, Kyoichi; Fujita, Minoru; Adachi,
                          Hiromichi
PATENT ASSIGNEE(S):       Wako Pure Chemical Industries, Ltd., Japan
SOURCE:                   U.S. Pat. Appl. Publ., 9 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     --------------       ----   --------    --------------------     --------
     US 2005069967         A1    20050331    US 2004-867912           20040615
     JP 2005106609         A2    20050421    JP 2003-340028           20030930
PRIORITY APPLN. INFO.:                       JP 2003-340028       A   20030930
ED   Entered STN:  03 Apr 2005
AB   The present invention relates to (1) a reagent for an immunoassay
     of a target substance existing in a free form and a bound form in a
     specimen, comprising a latex 1 which is immobilized with a monoclonal
     antibody 1 for the target substance, and a latex 2 which has a different
     mean particle size from the latex 1 and is immobilized with a monoclonal
     antibody 2 having a different recognition site for the target substance
     from the antibody 1; (2) an immunoassay method comprising
     reacting the target substance with the reagent of (1) and determining an
amount of
     the substance based on the result of an agglutination reaction
     among the target substance, the latex 1 and the latex 2; (3) a reagent kit
     comprising a reagent of (1) and a reagent containing an agglutination
     accelerator for an antigen-antibody reaction.

L81  ANSWER 2 OF 6  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 2
```

ACCESSION NUMBER: 2002:958988 HCAPLUS
DOCUMENT NUMBER: 138:21783
TITLE: **Agglutination**-promoting agent for antigen or antibody **immunoassay**
INVENTOR(S): Kakuta, Kyoichi; Wada, Hiroshi; **Ishihara, Kazuhiko**
PATENT ASSIGNEE(S): **Wako** Pure Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002365296	A2	20021218	JP 2001-169051	20010605
US 2004157276	A1	20040812	US 2004-626502	20040304

PRIORITY APPLN. INFO.: JP 2001-169051 A 20010605
ED Entered STN: 18 Dec 2002
AB Provided are aggregation-promoting compds. for use in **agglutination immunoassay.** These compds are branched polymers or copolymers having basic (monomer) structure of OPO2-O-R4-N(R1R2R3) where R1-3 are independently H, OH or alkyl group; and R4 is an alkyl group or alkylene group. The **agglutination immunoassay** reagent comprises carrier- or latex-immobilized antibody or antigen. The **agglutination immunoassay** is useful for determination of antigen or antibody, e.g. C-reactive protein, rheumatic factor and prostate-specific antigen.

L81 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:173633 HCAPLUS
DOCUMENT NUMBER: 138:217873
TITLE: Method of stabilizing substance altering in aqueous medium with heavy water
INVENTOR(S): **Wada, Koji**; Hanada, Toshiro
PATENT ASSIGNEE(S): **Wako** Pure Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003018614	A1	20030306	WO 2002-JP8458	20020822

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2001-253729 A 20010824
ED Entered STN: 07 Mar 2003

AB Disclosed are a stabilizer for a substance altering in aqueous media which comprises heavy water; a method of stabilizing a substance altering in aqueous media, characterized by causing the substance to coexist with heavy water; and a reagent for determining or detecting a substance contained in a sample comprising a substance altering in aqueous media and heavy water. The stabilizer stabilizes a substance altering in various aqueous media. Also provided is a composition containing the substance thus stabilized. The reagent is for determining or detecting a substance contained in the sample stabilized. A reagent for measuring GPT containing L-alanine 200, NADH 0.3, tris buffer (pH = 9) 25 mM, LDH 2400 IU, and sodium adipate 0.1 % in D2O was prepared

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 4

ACCESSION NUMBER: 2002:405026 BIOSIS
DOCUMENT NUMBER: PREV200200405026
TITLE: Decreased marble burying behavior in female mice lacking neuromedin-B receptor (NMB-R) implies the involvement of NMB/NMB-R in 5-HT neuron function.
AUTHOR(S): Yamada, Kazuyuki [Reprint author]; Wada, Etsuko; Yamano, Mariko; Sun, Ying-Jie; Ohara-Imaizumi, Mica; Nagamatsu, Shinya; **Wada, Keiji**
CORPORATE SOURCE: Division of Animal Experiment, Advanced Technology Development Center, Brain Science Institute, Riken, 2-1 Hirosawa, **Wako**-City, Saitama, 351-0198, Japan yamada@ncnp.go.jp
SOURCE: Brain Research, (28 June, 2002) Vol. 942, No. 1-2, pp. 71-78. print.
CODEN: BRREAP. ISSN: 0006-8993.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Jul 2002
Last Updated on STN: 24 Jul 2002

ED Entered STN: 24 Jul 2002
Last Updated on STN: 24 Jul 2002

AB Neuromedin B (NMB) is a mammalian bombesin-like peptide distributed widely in the central nervous system. This peptide exerts its function via the NMB receptor (NMB-R). Female NMB-R-deficient mice were used to study the role that NMB/NMB-R may play in 5-HT neuron function since this relationship was suggested in previous in vitro studies. As 5-HT neurons are thought to modulate marble burying behavior, a role for NMB-R in this behavior was assessed. Relative to wild-type mice, NMB-R-deficient mice showed decreased marble burying behavior. However, depletion of 5-HT by treatment with p-chlorophenylalanine (p-CPA) increased burying behavior in NMB-R-deficient mice suggesting that increased levels of 5-HT in the brain cause a decrease in burying behavior in NMB-R-deficient mice. While HPLC analysis showed that 5-HT content in the whole brain does not differ between NMB-R-deficient and wild-type mice, an **immunohistochemical** analysis of brain sections showed that 5-HT expression in the dorsal raphe (DR) nucleus is elevated in NMB-R-deficient mice. Furthermore, a quantitative RT-PCR analysis revealed that 5-HT1A-receptor gene expression is downregulated in NMB-R-deficient mice at the whole brain level. These behavioral and biological results suggest that NMB/NMB-R may modulate 5-HT neuronal activity by affecting DR function.

L81 ANSWER 5 OF 6 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:203901 BIOSIS
DOCUMENT NUMBER: PREV200400204444

TITLE: Analysis of lipid raft domains enriched in BACE1, possible interaction domains between amyloid precursor protein and BACE1.
AUTHOR(S): Sakurai, T. [Reprint Author]; Okuno, M.; Kaneko, K.; **Wada, K.**; Nukina, N.
CORPORATE SOURCE: Lab. for Structural Neuropathology, Brain Sci. Inst., RIKEN, **Wako**, Japan
SOURCE: Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 730.10. http://sfn.scholarone.com. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

ED Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

AB Lipid rafts are membrane microdomains enriched in cholesterol and sphingolipids, and act as platforms for conducting a variety of cellular functions. In vitro and in vivo studies pointed out high cellular cholesterol levels as a promoting factor for the processing of amyloid precursor protein (APP) to amyloid-beta peptide. Since APP and amyloidogenic APP-cleaving enzymes, BACE1 and gamma-secretase, show cholesterol-dependent association with lipid rafts, the domain will be a critical site for amyloidogenic processing. We hypothesized that raft-dependent interaction between APP and BACE1 is regulated not only by lipid environment but also by proteins in the same domains. To search for candidate raft proteins, we isolated lipid raft fractions from mouse brains or primary cultured neurons by a modified method, and performed **immuno**-isolation with anti-APP or anti-BACE1 antibody. By mass-spectrometric and **immunological** analyses, only a limited number of proteins were detected both in APP-containing rafts and in BACE1-containing ones, suggesting that APP and BACE1 are located in different raft domains and interact transiently. Systematic identification and characterization of enriched proteins in each fraction will provide new insights into the regulatory mechanisms of interaction between APP and BACE1 in lipid rafts.

L81 ANSWER 6 OF 6 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN DUPLICATE 3
ACCESSION NUMBER: 2002-0458932 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2002 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Variability in cholesteryl ester transfer protein in healthy Japanese hyper-HDL-cholesterolemic subjects
AUTHOR: YOSHIDA Akihiro; KODAMA Michiteru; NOMURA Hideki; KOBAYASHI Norifumi; **SUMIDA Kyoichi**; NAITO Michitaka
CORPORATE SOURCE: Department of Clinical Laboratory, Nakatsugawa Municipal Hospital, Nakatsugawa, Japan; Department of Geriatrics, Nagoya University Graduate School of Medicine, Nagoya, Japan; Osaka Research Laboratories, **Wako** Pure Chemical Industries, Osaka, Japan; Division of Nutrition and Health, Graduate School of Life Studies, Sugiyama Jogakuen University, Nagoya, Japan
SOURCE: Internal medicine : (Tokyo. 1992), (2002), 41(5),

357-359, 13 refs.
ISSN: 0918-2918
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Japan
LANGUAGE: English
AVAILABILITY: INIST-11214, 354000108274270100
UP 20021001
AB Objective Hyper-high density lipoprotein (HDL)-cholesterolemia has been considered to be anti-atherogenic and is referred to as longevity syndrome. However, hyper-HDL-cholesterolemia induced by a cholesteryl ester transfer protein (CETP) deficiency may not be athero-protective, rather being atherogenic in nature. In a rural area in central Japan, the incidence of hyper-HDL-cholesterolemia has been found to be rather high (3.1% of healthy people). We studied healthy Japanese people in this area with hyper-HDL-cholesterolemia, particularly in relation to CETP. Methods Serum lipids were analyzed, and CETP mass was determined with an enzyme **immunoassay** method. Materials Blood was drawn after an overnight fast from 17 Japanese (5 males and 12 females) with serum HDL-cholesterol (C) >=100 mg/dl. Results Serum CETP mass in hyper-HDL-cholesterolemic subjects was distributed in a wide range. Serum CETP mass was positively correlated with low-density lipoprotein (LDL)-C, apolipoprotein (Apo) B, and LDL-C/HDL-C, with statistical significance. CETP was also positively correlated with LDL-C/Apo B. Conclusion These results suggest that hyper-HDL-cholesterolemia may not be a single clinical entity, but a mixture of various pathophysiological conditions, and that the ratio of LDL-C to HDL-C and the size of LDL may be important factors in classifying these conditions.

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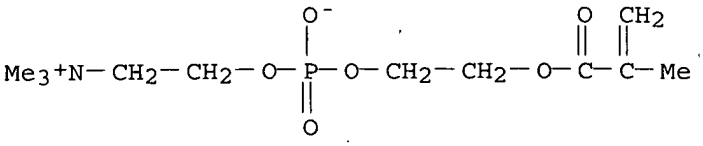
Sakaki etal. JP 2000-93169



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Nippon Shokubai Kagaku	1992			JP 419561 A	
Nof Corporation	1998			JP 10114800 A	HCAPLUS
Shionogi & Co Ltd				EP 141627 A	HCAPLUS
Shionogi & Co Ltd	1985			JP 6091983 A	

L82 ANSWER 19 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:215700 HCAPLUS
DOCUMENT NUMBER: 132:262394
TITLE: Polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for enzyme immunoassay
INVENTOR(S): Sakaki, Shujiro; Yamada, Satoru; Shudo, Kenshiro; Nakabayashi, Nobuo; Ishihara, Kazuhiko
PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000093169	A2	20000404	JP 1998-274782	19980929

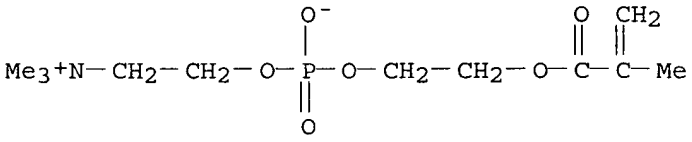
PRIORITY APPLN. INFO.: JP 1998-274782 19980929
ED Entered STN: 04 Apr 2000
AB Polymer/enzyme-conjugate and polymer/enzyme/substance with biol. specific binding ability-conjugate are provided for the use in a highly sensitive enzyme immunoassay. This polymer/enzyme-conjugate is prepared by chemical binding an enzyme for immunol. measurement (e.g., peroxidase) with a polymer synthesized by polymerizing the monomer constituent containing a hydrophilic monomer possessing a phosphorylcholin-analog group (e.g., 2-methacryloyloxyethylphosphorylcholine (MPC) (I)) and a monomer possessing a chemical reative group (e.g., methacrylate, 2-aminoethyl(meth)acrylate). The substance with biol. specific binding ability used for the conjugate is either antibody, biotin, avidin, or antigen. Various samples of polymer/horse radish peroxidase/biotin or IgG-conjugate prepared by this method exhibited an excellent solubility and 1.8-36 times higher sensitivity than the cases where no polymer was used to make conjugates.
IC ICM C12N011-08
ICS G01N033-532; C08F008-00; C08F220-06; C08F220-34; C08F230-02
CC 9-10 (Biochemical Methods)
Section cross-reference(s): 7
IT **Immunoassay**
(enzyme; polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for enzyme immunoassay)
IT 7659-36-1, 2-Aminoethylmethacrylate 7659-38-3, 2-Aminoethylacrylate 18358-13-9, Methacrylate, reactions **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine

RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for enzyme **immunoassay**)

IT **67881-98-5**, 2-Methacryloyloxyethylphosphorylcholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer/enzyme-conjugate and polymer/enzyme/antibody-conjugate for enzyme **immunoassay**)

RN 67881-98-5 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L82 ANSWER 20 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:599226 HCAPLUS

DOCUMENT NUMBER: 133:293102

TITLE: Water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system

AUTHOR(S): Sakaki, Shujirou; Iwasaki, Yasuhiko; Nakabayashi, Nobuo; Ishihara, Kazuhiko

CORPORATE SOURCE: Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, 101-0062, Japan

SOURCE: Polymer Journal (Tokyo) (2000), 32(8), 637-641
CODEN: POLJB8; ISSN: 0032-3896

PUBLISHER: Society of Polymer Science, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 29 Aug 2000

AB The purpose of this study is the development of a novel synthetic blocking reagent for the ELISA method. The water-soluble amphiphilic phospholipid polymer, poly[2-methacryloyloxyethyl phosphorylcholine (MPC)-co-styrene (St)], was synthesized, and the function of the poly(MPC-co-St) as a blocking reagent was compared with conventional blocking reagents which are made of proteins such as bovine serum albumin (BSA) and casein. The poly(MPC-co-St) solution functioned at the same level as BSA solution and casein solution for preventing non-specific antibody adsorption ($p>0.01$). When the 1.0% BSA solution and 1.0% casein solution were used as a blocking reagent, the remaining activity of the immobilized antibody decreased about 50% after 20 days. On the other hand, in 0.01% and 0.1% poly(MPC-co-St) solns., the activity remained 76% and 91% of the initial value, resp. The effects of poly(MPC-co-St) on the stabilization of the immobilized antibody depended on its concentration These results indicated that the poly(MPC-co-St) had the ability to inhibit denaturation of protein, i.e., proteins in the ELISA system kept their native structure. We concluded that the water-soluble amphiphilic poly-(MPC-co-St) is an effective synthetic blocking reagent in the ELISA method.

CC 9-10 (Biochemical Methods)

IT **Immunoassay**
(enzyme-linked immunosorbent assay; water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in immunoassay system)

f **134483-35-5P**
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in **immunoassay** system)

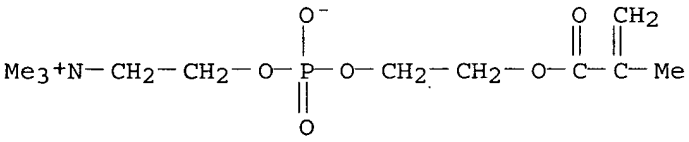
IT 100-42-5, reactions **67881-98-5**, 2-Methacryloyloxyethyl phosphorylcholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in **immunoassay** system)

IT **134483-35-5P**
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in **immunoassay** system)

RN 134483-35-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

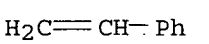
CM 1

CRN 67881-98-5
CMF C11 H22 N O6 P



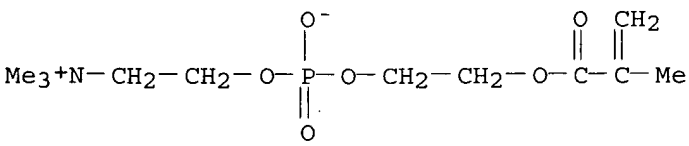
CM 2

CRN 100-42-5
CMF C8 H8



IT **67881-98-5**, 2-Methacryloyloxyethyl phosphorylcholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(water-soluble 2-methacryloyloxyethyl phosphorylcholine copolymer as a novel synthetic blocking reagent in **immunoassay** system)

RN 67881-98-5 HCAPLUS
CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anderton, B	1980	2	122	Immunol Today	
Donovan, J	1975	250	1966	J Biol Chem	HCAPLUS
Farr, A	1981	47	129	J Immunol Method	HCAPLUS
Imagawa, M	1982	4	41	J Appl Biochem	HCAPLUS
Ishihara, K	1991	25	1397	J Biomed Mater Res	HCAPLUS
Ishihara, K	1998	39	323	J Biomed Mater Res	HCAPLUS
Ishihara, K	1994	32	859	J Polym Sci Part A	HCAPLUS
Ishihara, K	1990	22	355	Polym J	HCAPLUS
Ishihara, K	1999	31	1231	Polym J	HCAPLUS
Ishikawa, E	1983	4	209	J Immunoassay	HCAPLUS
Isikawa, E	1983	18	219	Immunoenzym Tech	
Kojima, M	1991	12	121	Biomaterials	HCAPLUS
Lu, D	1991	3	127	J Biomater Sci Polym	HCAPLUS
Orci, L	1985	28	528	Diabetologia	HCAPLUS
Osborn, M	1978	77	R27	J Cell Biol	MEDLINE
Sakaki, S	1999	47	523	J Biomed Mater Res	HCAPLUS
Shaw, D	1980			Introduction to coll	
Wisdom, G	1976	22	1243	Enzyme-Immunoassay	HCAPLUS

L82 ANSWER 21 OF 70 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:274659 HCAPLUS
DOCUMENT NUMBER: 129:26995
TITLE: Polymeric solid support-immobilized antigen or antibody and its use
INVENTOR(S): Sakaki, Shujiro; Shudo, Kenjiro; Yamada, Akira; Matsuyama, Kazuo; Nakabayashi, Nobuo; Ishihara, Kazuhiko
PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan; Nakabayashi, Norio; Ishihara, Kazuhiko; Foundation for Scientific Technology Promotion
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10114800	A2	19980506	JP 1996-271126	19961014
PRIORITY APPLN. INFO.:			JP 1996-271126	19961014

ED Entered STN: 13 May 1998
AB The disclosed antigens or antibodies are coupled to polymeric solid support through phosphorylcholine groups and used for immunoassay. The phosphorylcholine-containing polymer is e.g. polymer comprising 2-methacryloyloxyethyl-2'-(trimethylammonio)ethylphosphate (MCP). Copolymers of MCP and Bu methacrylate, methylmethacrylate or 2-hydroxyethyl methylmethacrylate were prepared, coated with anti-mouse antibody for immunoassay.
IC ICM C07K017-08
ICS G01N033-543; C07K016-00
CC 15-2 (Immunochemistry)
Section cross-reference(s): 9
IT **Immunoassay**
(polymeric solid support-immobilized antigen or antibody and its use)
IT **67881-98-5DP**, polymers and copolymers **67882-00-2P** **125275-25-4P** **134483-35-5P** **148569-41-9P**